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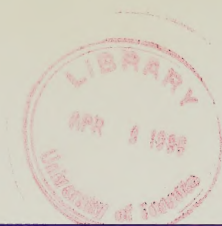




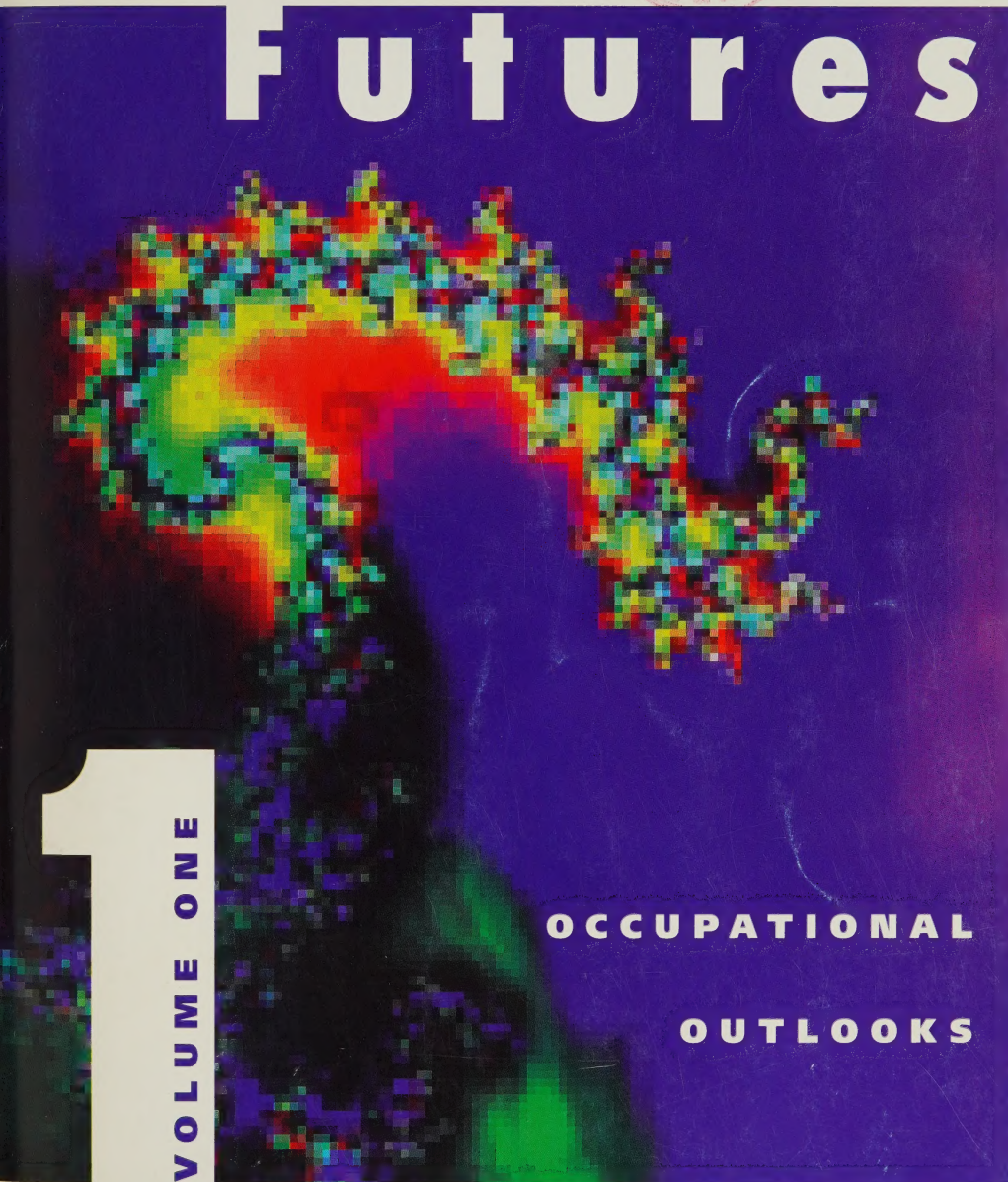


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# Job Futures



OCCUPATIONAL

OUTLOOKS

1996 EDITION







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# Job Futures

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**Occupational  
Outlooks**

**VOLUME ONE**

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Minister  
of Human Resources  
Development



Ministre  
du Développement  
des ressources humaines

Ottawa, Canada K1A 0J9

**MESSAGE FROM THE MINISTER OF HUMAN RESOURCES DEVELOPMENT CANADA**

I am very pleased to present the fourth edition of Human Resources Development Canada's *Job Futures* - Canada's guide to tomorrow's jobs.

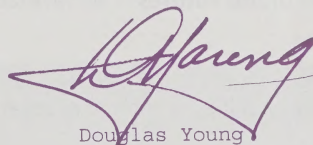
*Job Futures* was first launched in 1986 to provide counsellors with occupational information they could use to give better advice to Canadians on career choices, labour market changes and future employment trends. Over the past ten years, the job market has evolved, so has *Job Futures*. During this time it has become a valuable resource for parents, students, teachers, counsellors, and workers.

The 1996 two-volume edition has been modified to better reflect how labour market conditions and job prospects will change over the next five years. As well, it will provide useful and concise information on post-secondary programs of study and job prospects for new graduates today and to the year 2000.

As Minister of Human Resources Development I believe that better access to up-to-date information about career prospects is critical to fostering a healthy and growing job market. This is why Human Resources Development Canada will continue to provide Canadians with information about current and future labour market conditions through more frequent updates of *Job Futures*. To ensure that as many Canadians as possible are able to use *Job Futures*, it is now available in three formats - book, CD-ROM and on the Internet.

I am confident that with the improvements to the latest edition, *Job Futures* will be an even more valuable and practical reference tool in helping Canadians make informed career choices.



  
Douglas Young



# JOB FUTURES

## Preface to the Fourth Edition

**Job Futures** is a two-volume publication that provides Canadians with information about the current world of work and projections for the future. It is published by the Canadian Occupational Projection System (COPS) of the Applied Research Branch and the Occupational and Career Development Division of Human Resources Development Canada (HRDC).

**Volume One: Occupational Outlooks** provides general information on 211 occupational groups covering all the jobs in Canada. It also includes specific information on current labour market conditions and projections of how these conditions may change over the next five years.

**Volume Two: Career Outlooks for Graduates** provides information on the work experience of recent postsecondary graduates of 155 programs of study. It also provides projections of job prospects in the next five years for graduates in these study areas.

These estimates and projections for the occupational labour market are the result of a team of HRDC specialists working with sophisticated forecasting tools as well as information provided by professional associations in the private sector.

No one can foresee the future. Continuing globalization, technological developments and political, social and economic change make accurate forecasting difficult. The estimates and projections in **Job Futures** are the best that HRDC specialists could achieve in a rapidly changing labour market. Plans are to update these projections on a regular basis so as to incorporate most recent developments. Please use these volumes with caution.

This fourth edition of **Job Futures** is also available in electronic format.

General enquiries or comments regarding **Job Futures** should be addressed to:

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Occupational Projections and Macroeconomic Studies  
Applied Research Branch, Strategic Policy  
140 Promenade du Portage  
Phase IV, 4th Floor  
Hull, Quebec  
K1A 0J9

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# Introduction to Volume One

## What's Inside

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Volume One provides general information on 211 occupational groups covering all jobs available in Canada. Information on each occupational group includes:

- types of employers who hire workers in the group;
- job duties and responsibilities;
- the level and type of education, training and experience required of workers in the group;
- main labour market characteristics of the group;
- current prospects of finding work in occupations in the group; and
- job prospects for the next five years.

This information applies to the occupational group *only*, not to each individual occupational title within the group. Generally, jobs that have been grouped together share similar characteristics. It is possible, however, that a particular occupation within the group may experience *different* labour market conditions than others in the group, or perhaps it has responded or will respond differently to the *same* conditions. Where possible, such situations are described in the text.

The information on each occupational group is presented in text and charts. The text is concise and easy to read. The charts provide “at-a-glance” snapshots of data.

The classification of occupations in Volume One is based on HRDC’s National Occupational Classification (NOC) which arranges work according to *skill levels* and *skill types*. Please note the three- or four-digit number that appears in the **See also** section at the end of each occupational group. This number is the code used for that occupational group in the NOC. For a description of the structure and organization of the NOC, please read **About the National Occupational Classification (NOC)** in this Introduction.

## Who Will Find Volume One Useful?

Volume One will be useful for all Canadians who are interested in the current and future labour market. This includes:

- *counsellors* providing advice on career choices, career changes and future labour market prospects;
- *workers* who are thinking about upgrading their skills or making a career change;
- *students* seeking information on the world of work and its relation to education;
- *parents* who wish to help their children plan for the future;
- *unemployed* persons exploring job prospects and training opportunities; and
- *individuals* who are re-entering the labour market.

Volume One of **Job Futures** can help users with career planning since it provides information on the type of economic conditions that face newcomers to an occupational group. This information focusses on employment opportunities, working conditions and financial benefits. *Individual* preferences, aptitudes, skills, education and training also play an important role in career planning. For example:

- An individual re-entering the labour market may find the working conditions in an occupation particularly attractive because of his or her personal working style.
- An individual may have special skills that will enable him or her to do much better than the average person in an occupation where those skills are essential.
- Training and educational institutions vary in quality. Since the labour market distinguishes between graduates from different institutions, students planning their educational paths should realize that it may be easier to obtain work in desired occupations if they have acquired skills in institutions given higher ratings by employers.



## More About the Text

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### At Work

This section provides information about work experience in the occupational group. It has two main parts:

- An opening statement identifies the type of employers which hire workers in the group and provides information on self-employment.
- Facts presented in bullet form provide a brief description of the main work activities in the group. For some larger occupational groups, these work activities are grouped according to specific jobs.

There may be an additional closing statement for groups that include many occupations. This statement lists job titles not mentioned elsewhere in the **At Work** section.

### Education, Training and Experience

This section provides information on the employment requirements for the occupational group, including type and level of education, specific training, work experience, licences, certificates and registration. The section has two parts:

- An opening statement identifies the minimum level of education, training and experience that workers require to obtain employment.
- Facts presented in bullet form provide specific requirements for all or some workers within the group.

This section does *not* provide an exhaustive description of all employment requirements. Rather, it gives the reader general information about those requirements that are common to the occupational group.

### About this Occupation (these Occupations)

This section provides information on general economic characteristics for the occupational group and an evaluation of the current labour market conditions. It has three parts: an opening paragraph, facts presented in bullet form and a concluding statement in the shaded oval.

The opening paragraph provides information about the size of the occupational group and employment trends. It offers a snapshot of this occupational group from 1984 to 1994 and includes:

- the number of workers in the group in 1994;
- a percentage indicating the growth or decline of workers since 1984; and
- a comparison with employment growth in the overall economy.

The last sentence of the paragraph describes *recent* employment trends from 1992 to 1994. These trends reflect growth or decline in general, rather than temporary conditions that may affect hiring. The recent trend for the occupational group may be favourable or unfavourable depending on the strength or weakness of the labour market for that group.

The facts presented in bullet form provide information on the labour market characteristics of the occupational group. Topics include the part-time employment, proportion of self-employed workers, gender mix, age of workers, unemployment rate, earnings distribution and sensitivity of employment to the business cycle and seasonal factors. In most cases, this information provides a comparison between the occupational group and all occupations.

The concluding statement, which is in the shaded oval area, describes the *current* labour market conditions in the occupational group. These conditions refer to the recent state of the job market for people working or looking for work and are classified as *poor*, *fair* or *good*.

*Poor* job market conditions usually mean that workers will have difficulty finding stable work or that working conditions are not attractive or are deteriorating relative to those in other occupations.

For employed workers, these poor conditions will often mean loss of work, a high probability of experiencing unemployment spells, lower wages and salaries and involuntary part-time work. For new entrants, such as school-leavers and immigrants, poor job market conditions mean a low probability of finding permanent work and, if they find a job, relatively low pay.

Conversely, *good* labour market conditions usually mean that finding stable work is relatively easy and working conditions are attractive or improving.

Where appropriate, the concluding statement presents additional information that distinguishes between labour market conditions that would prevail in a normal situation for this occupational group and the actual situation which may be affected by temporary factors.

For example, the most common temporary factor affecting labour market conditions at this time is the lingering effects of the 1991-92 recession. This economic downturn has resulted in a remaining weakness in the markets for occupations that have been most affected by the business cycle despite a labour market that is fundamentally sound.

The statement in the shaded area is based on an interpretation of statistics relevant to the occupational group. It is a best *estimate* of the current labour market conditions; however, being an estimate, it is subject to error.

As mentioned above, what is true for the occupational group may not be true for a particular occupation within that group. It is also possible that labour market conditions may vary across provinces and local labour markets.

## Looking to the Year 2000

This section provides a projection of how labour market conditions may change in the next five years. It has two parts:

- an opening statement about future labour market conditions; and
- facts presented in bullet form that provide more detailed information.

This projection is based on the current labour market conditions as described in **About this Occupation (these Occupations)** and on forecasting models regarding future employer requirements and the number of people who will be seeking work in the occupational group. This projection also considers the speed at which current conditions are projected to change.

Future labour market conditions depend on current labour market conditions *and* how these conditions will change in the future. For example, work prospects for an occupational group may *worsen* but, if the current conditions are *very good*, it is possible that the future conditions will be *good* or *fairly good*, rather than *poor*.

Readers should use these projections with caution. Although they are based on the best judgment of specialists using the most sophisticated forecasting tools available, their validity may change in the case of unexpected political, social or economic circumstances. The detailed economic assumptions underpinning the projections contained in this edition of **Job Futures** are described in the *Spring 1995 Update* of the COPS projection.

This section starts with a general statement on how labour market conditions will evolve over the period from 1995 to 2000. The statement varies as follows:

- If conditions for the occupation are expected to get better (get worse), the statement reads, "Labour market conditions in this occupation will improve (will worsen) over the next five years."
- If this change is expected to be large enough to change the overall rating of conditions for this occupation, the new rating is also given. For example, for an occupation in which current conditions are fairly good, but will worsen drastically, the statement reads, "Labour market conditions in this occupation will worsen from fairly good to poor over the next five years."
- If labour market conditions in the occupation are projected to be stable, the statement notes that conditions will remain at the current level. For example, for an occupation where current conditions are good and are expected to be stable, the statement reads, "Labour market conditions in this occupation will remain good through the year 2000."

The facts in bullet form describe specific developments that may influence labour market conditions such as technological changes that affect the nature of work or required qualifications and changing consumption patterns,

especially government expenditures. Where appropriate, a final bullet identifies those industrial sectors that are expected to provide most of employment opportunities in the future.

## See Also

Volume One may be a starting point for readers who are interested in more information on a particular occupational group. This section indicates ways to find that additional information.

The first line provides a cross-reference to the NOC. It identifies the NOC code of the occupational group. This code provides information on the *skill type* and *skill level* requirements of the occupational group.

Some three-digit group codes have related unit group codes. These four-digit unit group codes refer readers to the specific occupational groups within the "parent" three-digit group that are found in *Job Futures*. For example, the occupational group 414, Secondary and Elementary School Teachers and Counsellors, has the related unit group codes 4141, Secondary School Teachers; 4142, Elementary School and Kindergarten Teachers; and 4143, School and Guidance Counsellors. Conversely, for all four-digit occupations found in *Job Futures*, the related parent three-digit code is given.

For more information on these codes, read **About the National Occupational Classification (NOC)** in this Introduction.

The second line provides a cross-reference to Volume Two. It gives the codes of the major fields of study that supply graduates who would have the educational requirements to work in the occupational group.

The third line refers readers to the List of Associations at the end of Volume One. This list supplies the names and addresses of organizations that can provide useful information on jobs in various occupational groups. It is organized by the NOC occupational code with the relevant associations listed alphabetically below the code. Please note that a listing in ***Job Futures*** is not an HRDC endorsement of either the association or its information.

## More About the Charts

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The charts in Volume One present data of interest to the reader in a graphic format.

### Full-Time Earnings

This bar-style graphic provides information on the 1993 wages or salaries for full-time and full-year workers within the occupational group.

- The *highest number* is the average of earnings of the top 10% of earners.
- The *average number* represents average earnings of all workers.
- The *lowest number* is an average of the earnings of the lowest 10% of earners.

The term *full-time earnings* does not include other forms of compensation such as retirement benefits, stock options or expense accounts.

Statistics Canada's Survey of Consumer Finance was the source for information on earnings for three-digit occupational groups. The 1991 Census was the source of earnings estimates for four-digit occupational groups. The distribution of earnings for the three-digit occupational groups is based on survey results that may not reflect fully the true distribution of earnings for some occupational groups included in ***Job Futures***.

### Where They Work

This bar chart identifies the seven industrial sectors that employ most of the workers in the occupational group according to the 1991 Census. It also shows what percentage of workers are employed in each sector. The list is not comprehensive. While workers in this group may work in sectors that are not shown, their number is statistically insignificant for the purposes of ***Job Futures***.



The COPS structure and Statistics Canada's 1980 Standard Industrial Classification are the sources for this information.

## Type of Employment

For three-digit occupational groups, this bar chart compares the proportions of part-time and self-employed workers in the occupational group in 1994 to those for all occupations. Statistics Canada's Labour Force Survey is the source of data for this information.

For four-digit occupations, this bar chart compares the proportion of part-time workers in the occupation to that for all occupations. The 1991 Census is the source of data for this information.

Part-time employment is defined as working less than 30 hours a week. Self-employment describes those workers who work for themselves.

## Unemployment Rates

For three-digit occupational groups, this line chart compares the unemployment rate for the group to the average rate for all occupations over the 1982-94 period. Statistics Canada's Labour Force Survey is the source for this information.

For four-digit occupations, this bar chart compares the unemployment rate for the occupation to that for all occupations in 1994. This information is an estimate based on the Labour Force Survey and the 1991 Census.

## Percentage of Women

This bar chart compares the proportion of employed women in the occupational group to that for all occupations. Statistics Canada's Labour Force Survey is the source of information for the three-digit occupational groups. The 1991 Census is the source for the four-digit occupations.

## Age of Workers

This pie chart provides information on the proportions of different age groups of workers employed in the occupational group. The workers are grouped into four age categories: 15-24 years old, 25-44 years old, 45-54 years old and those 55 or older.

Statistics Canada's Labour Force Survey is the source for information on the *three-digit* occupational groups. Estimates for the four-digit occupations are based on the 1991 Census.

## Work Prospects

This bar-style graphic provides information on how labour market conditions will change in the occupational group from 1995 to 2000. These conditions are shown as *getting better*, i.e., they will improve from current conditions; *stable*, i.e., they will stay more or less the same; or *getting worse*, i.e., they will deteriorate from current conditions. HRDC's Canadian Occupational Projection System is the source for this information.

# About the National Occupational Classification (NOC)

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The NOC classifies and describes more than 25,000 occupations in the Canadian labour market. These occupations are categorized into three levels: 26 major groups, 139 minor groups and 522 unit groups.

The 26 major groups are identified by two-digit numbers. Some examples are: code 11, Professional Occupations in Business and Finance; code 32, Technical and Skilled Occupations in Health; and code 86, Labourers in Primary Industry. These groups are then further broken down into three-digit, minor groups.

The 139 minor groups are identified by three-digit numbers. Some examples are: code 513, Creative and Performing Artists; code 621, Sales and Service Supervisors; and code 761, Trades Helpers and Labourers. These groups, in turn, are further broken down into four-digit, unit groups.

The 522 unit groups, identified by four-digit numbers, provide the detailed information found in the NOC binder. Each unit group has information on employers, sample occupational titles, main duties, employment requirements and any pertinent additional information. Some examples are: code 1232, Loan Officers; code 5253, Sports Officials and Referees; and code 7266, Blacksmiths and Die Setters.

Volume One of **Job Futures** includes 137 three-digit and 74 four-digit occupational groups. Some of the three-digit groups comprise information on two or more four-digit occupations. The occupational NOC code number for each of the four-digit groups is shown in the **See also** section. For example, code 122, Administrative and Regulatory Occupations is followed by two of its eight unit occupations — code 1221, Administrative Officers and code 1225, Purchasing Agents and Officers.

Four-digit occupations are included because they provide readers with additional information on occupations for which we had specific knowledge regarding their market prospects.

The first two digits of the NOC code (the major code) identify skill types and levels of an occupational group. The first digit of a code — from 0 to 9 — corresponds to a generic *skill type* category (see Box A ). Within each *skill type* category, the occupational groups are then organized according to decreasing *skill levels*. The second digit — from 1 to 6 — corresponds to one of four different *skill levels* (see Box B ).

In Volume One, the occupational groups are organized according to *skill type* categories, beginning with those that start with the digit 0 — referring to occupations in senior management — and ending with those that start with the digit 9 — referring to occupations unique to processing, manufacturing and utilities.

Within each of the skill type categories, the groups are organized according to *skill levels*. The groups requiring the highest skill levels are first with the rest of the groups ordered according to *decreasing* skill levels. For example, the first group in the category of trades, transport and equipment operations is code 721, Contractors and Supervisors, Trades and Related Workers. The group requires a higher skill level than the last group, code 762, Public Works and Other Labourers.

## For More Information

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Volume One of **Job Futures** does not provide complete information on training qualifications, full job descriptions or working conditions. It is a complementary publication on career information. There are many sources of information about occupations, counselling, training and education. They include:

- The *National Occupational Classification* (NOC) describes occupations, employment and licensing requirements in Canada.
- *NOC Career Handbook* (available in 1996) details career counselling information based on occupational groups in the NOC.
- *Career Considerations* provides a wall chart and accompanying brochures on 19 occupational groups.
- *Career Moves* is a series of booklets on labour market trends and job opportunities in different sectors of the economy.
- *Career Directions* details information about 160 jobs that do not require a university education.
- *Canada Prospects* gives career information for all Canadians in an annually published tabloid format.
- *InterOptions* is an interactive software program that helps users match their interests to different careers.

More information on these publications and products is available from :

Human Resources Partnerships Directorate  
Occupational and Career Development Division  
140 Promenade du Portage  
Place du Portage  
Phase IV, 5<sup>th</sup> Floor  
Hull, Quebec K1A 0J9  
Fax: (819) 997-0227

Also, most provincial governments, often in collaboration with regional offices of Human Resources Development Canada, publish information on future job prospects within their province. Regional offices of HRDC also offer relevant publications of their own. Readers who want further information should contact their provincial Ministry of Education or Labour or the HRDC Regional Offices in their province.

### Box A

When the first digit is	...the Skill Type Category is:
1	Business, Finance and Administrative Occupations
2	Natural and Applied Sciences and Related Occupations
3	Health Occupations
4	Occupations in Social Science, Education, Government Service and Religion
5	Occupations in Art, Culture, Recreation and Sport
6	Sales and Service Occupations
7	Trades, Transport and Equipment Operators
8	Primary Industry
9	Processing, Manufacturing and Utilities
When the second digit is	...the Skill Level Category is:
1	Skill Level A (Professional Occupations)
2 or 3	Skill Level B (Technical, Paraprofessional and Skilled Occupations)
4 or 5	Skill Level C (Intermediate Occupations)
6	Skill Level D (Labouring and Elemental Occupations)
<b>Important Note:</b>	This applies to all occupations except management occupations. For management, the first digit is "0" and the second digit represents the skill type categories, from 1 to 9, as above.



## Box B

NOC SKILL LEVEL CRITERIA		
	EDUCATION/TRAINING	OTHER
<b>SKILL LEVEL A</b>	University degree (bachelor's, master's or postgraduate)	
<b>SKILL LEVEL B</b>	Two to three years of postsecondary education at community college, cegep or trade vocational school	Occupations with supervisory responsibilities are assigned to skill level B.
	Two to four years of apprenticeship training	Occupations with significant health and safety responsibilities (e.g., firefighters, police officers and registered nursing assistants) are assigned to skill level B.
	Three to four years of secondary school and more than two years of on-the-job training, training courses or specific work experience.	
<b>SKILL LEVEL C</b>	One to four years of secondary school education.	
	Up to two years of on-the-job training, external training courses or specific work experience.	
<b>SKILL LEVEL D</b>	Up to two years of secondary school and short work demonstration or on-the-job training.	

# JOB FUTURES

## Occupations



# Legislators and Senior Managers

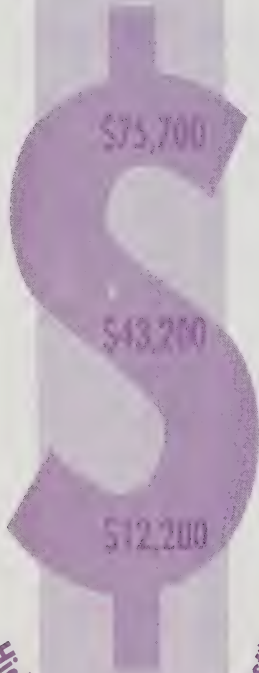
## At Work

Legislators and senior government managers and officials work in national, provincial, territorial and local levels of government. Senior managers outside of government are employed throughout the private sector.

- Legislators enact, amend or repeal laws and regulations at the federal, provincial, territorial and local levels of government.
- Senior government managers and officials plan, organize, direct and control the major activities of government departments, boards, agencies and commissions. They establish the direction of their organizations according to policies made by elected officials and legislative bodies.
- Senior managers (other than government) plan, organize, direct and control the major activities of their organizations. Working alone or with a board of directors, they establish policies to direct their organizations.

## Full-Time Earnings

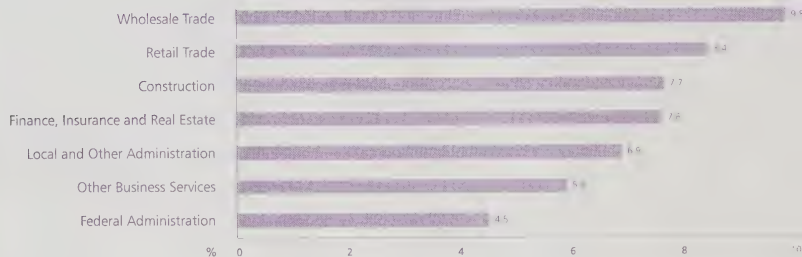
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group have different educational requirements, depending on their position.

- Legislators are elected or appointed.
- Senior government managers and officials usually require a university degree or college diploma and several years' general managerial experience. They may also need a graduate degree in a related field.
- Senior managers (other than government) usually have a university degree or college diploma in a specific or a related discipline, as well as several years' managerial experience related to their area of work. They may need to specialize in a particular area and obtain a professional designation.



## About these Occupations

131,000 workers were employed in this group in 1994. Employment increased by 35% over the 1984-94 period while economy-wide employment rose by 17%. Recent employment trends in these occupations are favourable.

- 75% of this group work in private sector senior management jobs.
- 95% of workers are employed full-time, reflecting the responsibilities of senior managers who must be on the job during standard hours.
- There are somewhat fewer self-employed workers than the average in all occupations.
- There are somewhat fewer women workers than average, but the proportion has increased and is approaching the national average.
- There are few young people in these occupations, reflecting educational requirements and the experience needed for senior positions.
- The unemployment rate is significantly lower than the national average.
- Full-time earnings are much higher than the national average showing the results of experience and education, and the responsibility of senior managers.
- Employment in these occupations is somewhat less sensitive to economic conditions than the economy as a whole and is not seasonal.

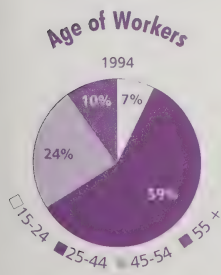
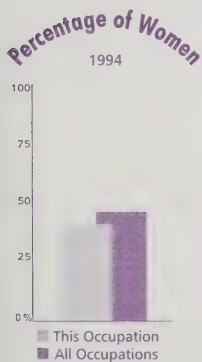
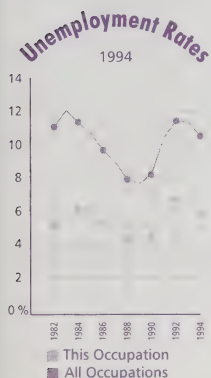
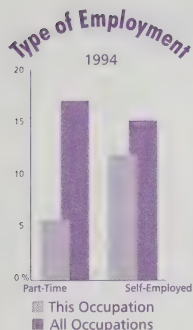
**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain good through the year 2000.

- Competition for senior management jobs will be intense, as an ageing work force will result in large numbers of middle managers who expect to move into senior positions.
- Wholesale and retail trade, construction and professional services should provide the most job openings for this group over the next five years. Employment is expected to decline in federal administration.

See also: This Occupation Code: 001.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U85, C14.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Administrative Service Managers

## At Work

People in this group are employed throughout the private and public sectors.

- Financial managers plan and direct the operations of accounting, audit and other financial departments, and develop and implement financial policies and systems.
- Human resource managers plan and direct the operations of human resource and personnel departments, and develop and implement policies, programs and procedures relating to all aspects of personnel administration.
- Purchasing managers plan and direct the operations of purchasing departments, and develop and implement the purchasing policies of their organization.
- Managers providing other administrative services plan and direct departments that offer a single service such as security, records management and admissions, or several services such as finance, human resources, purchasing and computer services.

## Full-Time Earnings

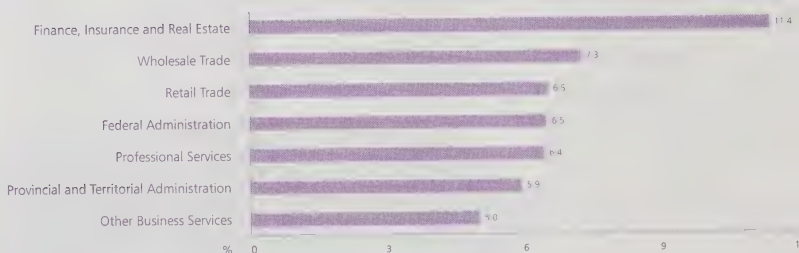
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These managers usually require a university degree or college diploma in business administration, economics, commerce or a related discipline.

- They usually need several years' experience and have completed company, or other, management training programs.
- Purchasing managers may require a university degree or college diploma in a field related to the products they purchase, and the designation "Certified Professional Purchaser" (C.P.P.) from the Purchasing Management Association of Canada (PMAC) or registration in the PMAC education program.

## About these Occupations

130,000 workers were employed in this group in 1994. Employment grew by 43% over the 1984-94 period, while employment increased economy-wide by 17%. Recent employment trends in these occupations are highly favourable.

- Almost half the workers in this group are financial managers.
- 93% of workers are employed full-time, well above average. The proportion of part-time work rose slightly over the 1984-94 period.
- The proportion of self-employed workers is somewhat less than the average of all occupations.
- In the past, there were fewer women in this occupational group than average but, by 1994, the percentage of women had reached the national average.
- Fewer young workers than in other occupations reflect educational requirements and the experience needed to make managerial decisions.
- The unemployment rate is half the national average.
- Full-time earnings are much higher than the national average, reflecting the results of experience, the education and the responsibility undertaken by managers.
- Employment in these occupations is moderately sensitive to business conditions and is not seasonal.

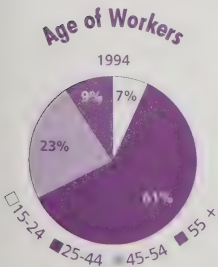
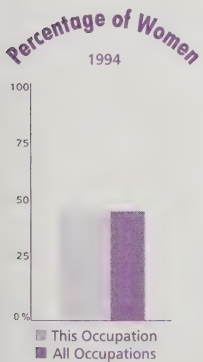
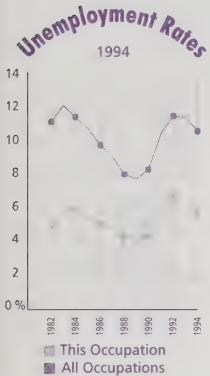
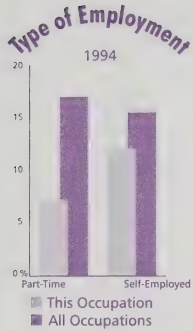
**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for this occupational group are expected to remain good through the year 2000.

- Restructuring of corporate administrative services will result in jobs being generated outside the firm. Prospects for new entrants will be more competitive as the supply of experienced and qualified candidates from downsizing increases the competition for available jobs.
- Finance, insurance, real estate, retail trade and professional business services are expected to lead job growth for this group over the next five years. Employment in federal administration is expected to decline.

**See also:** This Occupation Code: 011. Related Codes: 0111, 0112.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, C11, C14.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Financial Managers

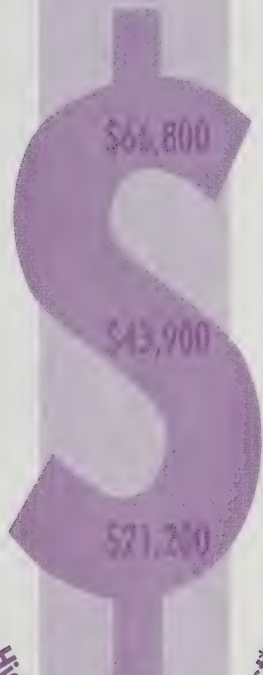
## At Work

These managers plan, organize, direct and control the operations of accounting, audit and other financial departments in the private sector and government. Their duties require them to:

- Develop and implement financial policies, systems and procedures;
- Prepare, or co-ordinate the preparation of, financial statements, estimates, summaries and other financial analyses and management reports;
- Take part in strategic decision making, including the setting of long-term goals, development of organizational and financing strategies, and decisions regarding products, services or programs as well as mergers and acquisitions;
- Evaluate financial reporting, accounting and investing systems and make recommendations for changes to senior management; and
- Participate in teams involved in marketing, design and development, procurement, process engineering, manufacturing and accounting.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group usually have a university degree, an accounting designation or a college diploma in business administration, economics, commerce or a related field.

- They must usually complete a company or other management training program.
- They also need several years' experience in accounting, auditing, budgeting, financial planning and analysis or another financial activity.
- They may require a recognized accounting designation such as CGA (Certified General Accountant), CA (Certified Accountant) or CMA (Certified Management Accountant).
- With experience, they may advance to senior management positions in financial management.

## About this Occupation

64,000 workers were employed in this occupation in 1994 — 39% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 95% are employed full-time, a reflection of the working conditions which require managers to be on the job during standard hours.
- The proportion of women in this occupation is somewhat below the average of all occupations.
- There are very few young workers in this occupation, a reflection of the need for schooling and work experience in managerial positions.
- The unemployment rate is about half the national average.
- Full-time earnings are better than the national average, as a result of education and experience, and responsibilities given to managers.
- Employment is moderately affected by the business cycle but not by seasonal factors.

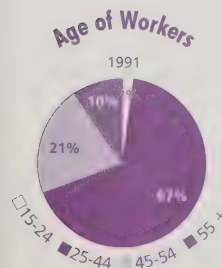
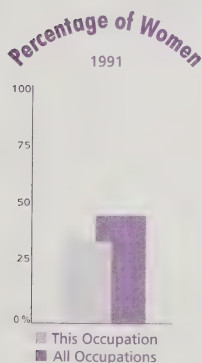
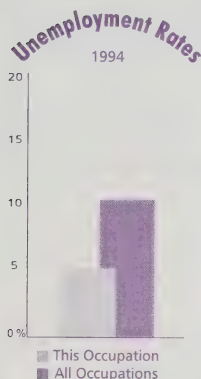
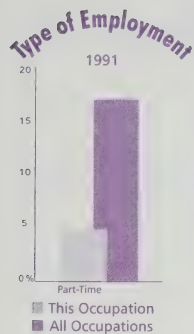
**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation will remain good through the year 2000.

- Competition will be keen for job openings as more experienced workers apply for career advancement into this occupation.
- Technological changes affecting this occupation include computerized financial systems in accounting and in payroll and computer-aided software engineering. Managers are expected to upgrade their skills substantially with the diffusion of this technology.
- Although employment is distributed over a wide variety of industries, professional services and the finance, insurance and real estate industries are expected to continue to provide most of the employment growth for financial managers over the next five years.

**See also:** This Occupation Code: 0111. Related Code: 011.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, C11, C14.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Human Resource Managers

## At Work

These managers plan, organize, direct and control the operations of human resource and personnel departments in the private sector and government. Their duties may require them to:

- Plan the human resource needs of an organization by consulting with other managers;
- Co-ordinate training and recruiting;
- Develop and implement labour relations policies and procedures, and negotiate collective agreements;
- Administer employee development, language training and health and safety programs;
- Oversee the classification and rating of occupations;
- Organize and conduct employee information meetings on employment policy, benefits and compensation; and
- Advise other departmental managers on interpretation and administration of personnel policies and programs.

## Full-Time Earnings

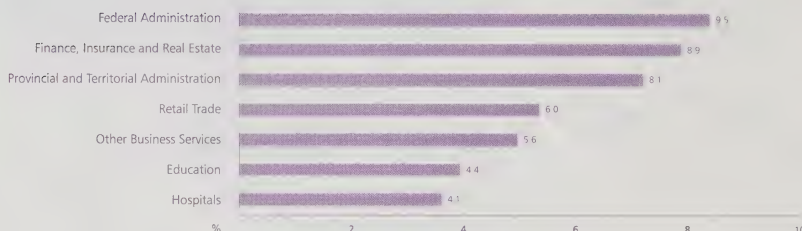
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Human resources managers must have either a university degree in a field related to personnel management, such as business administration, industrial relations, commerce or psychology, or they must complete a professional development program in personnel administration.

- They must also have several years' experience as a personnel officer or human resource specialist.
- With experience, they may advance to senior management positions.



## About this Occupation

30,000 workers were employed in this occupation in 1994 — 52% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 97% of workers are employed full-time, reflecting working conditions which require managers to be on the job during standard hours.
- The proportion of women in this occupation is slightly below the average for all occupations.
- There are very few young workers, a situation that reflects the schooling and work experience required for management positions.
- The unemployment rate is less than half the national average.
- Full-time earnings are better than the national average as a result of education and experience, and responsibilities given to managers.
- Employment is only moderately affected by the business cycle and is not seasonal.

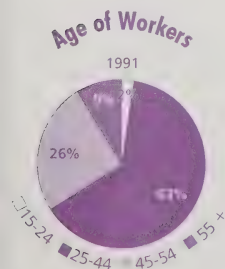
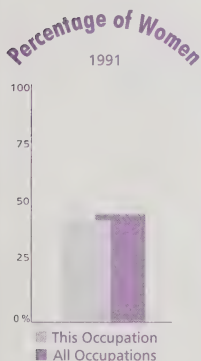
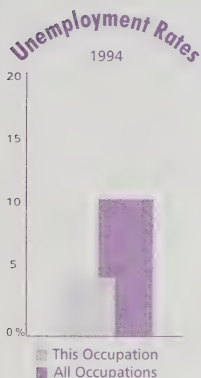
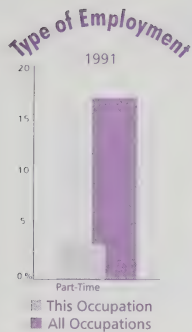
**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation will remain good through the year 2000.

- Competition will be keen for job openings as more experienced workers apply for career advancement.
- Technological changes affecting this occupation include computerized human resource management systems to maintain several databases on employee personnel information. With the adoption of these new systems managers are expected to upgrade their skills.
- Although employment for this group is not concentrated in any one industry, the finance, insurance and real estate industries are expected to contribute the most to job growth over the next five years and should surpass the federal administration sector as the largest employer.

**See also:** This Occupation Code: 0112. Related Code: 011.  
Vol. 2 Field of Study Cross-index: M11, U11, U86.  
For further information, see *List of Associations*.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



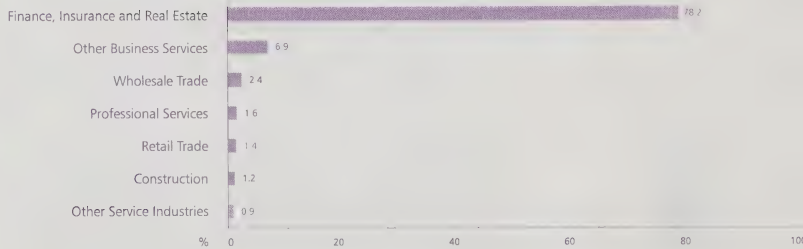
# Managers in Financial and Business Services

## At Work

People in this group work in financial institutions, such as insurance and real estate firms, stock and mortgage brokerages, investment firms, security and commodity exchanges, banks and credit departments, and in marketing research and advertising firms.

- Insurance managers plan and direct the activities of organizations that sell auto, fire, life and other insurance, as well as health and financial services and products.
- Real estate managers plan and direct the activities of organizations engaged in the sale, purchase, lease and property management of residential, commercial, industrial and other properties.
- Mortgage brokerage managers plan and direct the activities of organizations that find lenders and lending institutions on behalf of clients.
- Securities managers plan and direct the activities of organizations that buy and sell stocks, bonds and other investments on behalf of clients.
- Banking managers plan and direct branch operations or departments of banks, trust companies, credit unions and similar institutions.
- Credit managers plan and direct the activities of credit departments within industrial and commercial establishments.
- Business services managers plan and direct the activities of organizations such as market research and management consulting firms and personnel, advertising and other business services.

## Where They Work



## Education, Training and Experience

These managers usually possess a university degree or college diploma in business administration, economics or another field related to the business service they provide.

- They usually require several years' experience.
- They may need management experience and completion of company or other management training programs.
- Some managers may also have to obtain professional licences, certification or registration.

Full-Time Earnings

1993

\$66,500

\$42,700

\$20,000

Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

91,000 workers were employed in this group in 1994. Employment grew by 40% over the 1984-94 period, while economy-wide employment rose by 17%. Recent employment trends in this group are favourable.

- Over half of workers in this group are credit and investment managers, and one third are insurance, real estate and brokerage managers.
- 94% work full-time, reflecting working conditions that require managers to be on the job during standard hours.
- The proportion of self-employment is about the average of all occupations.
- The percentage of women has increased steadily since 1984 in this group and is now slightly below the average.
- There are few young people in these occupations, reflecting educational requirements and the work experience needed for managerial positions.
- The unemployment rate is about half the national average.
- Full-time earnings are much higher than the national average reflecting the returns as a result of experience and education, and the responsibilities given to managers.
- Employment in these occupations is affected by business conditions and is not seasonal.

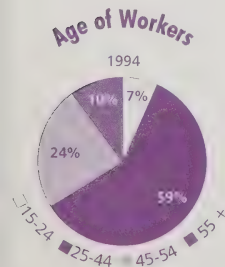
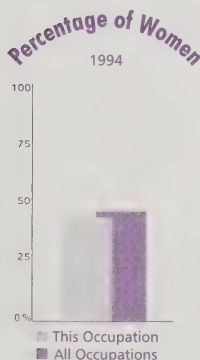
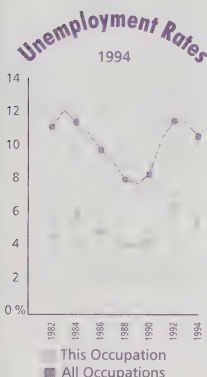
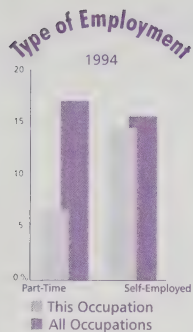
**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupational group will remain good through the year 2000.

- Technological change has raised the skill requirements for this group as computerized financial systems and automatic teller machines are widespread in the financial industry. Telecommunication technologies are also changing the speed, volume and complexity of the information that financial managers must analyze to make decisions.
- Most employment growth over the next five years is expected to be in the finance, insurance and real estate industries, the largest employer for this occupational group. Strong employment growth is also expected in professional services, business services and other service industries, and in wholesale and retail trade.

**See also:** This Occupation Code: 012.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U86, C14.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Managers in Communication (Except Broadcasting)

## At Work

People in this group work in telephone, telegraph, satellite and other telecommunication companies, and in Canada Post Corporation and courier companies.

- Telecommunication carrier managers plan and direct the operations of telecommunication organizations and facilities. They analyze and evaluate telecommunication installation, operation and maintenance services and recommend improvements.
- Postal and courier service managers plan and direct the activities and operations of postal facilities, courier service companies or Canada Post divisions. They review the effectiveness of their services and make required changes.

## Full-Time Earnings

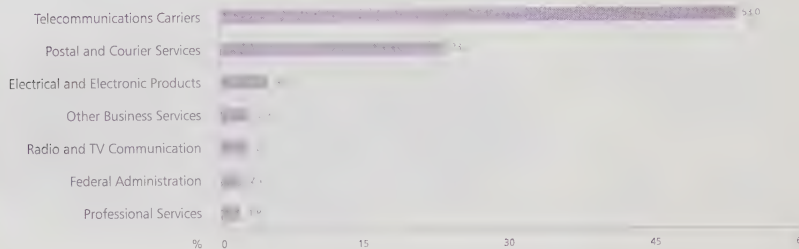
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These managers usually require a university degree or college diploma.

- Telecommunication carrier managers usually must have a university degree in science, electrical or electronics engineering or a related field, and several years' experience in a related technical profession including supervisory experience.
- Postal and courier service managers usually need several years' supervisory or operational experience.

## About these Occupations

16,000 workers were employed in this group in 1994. Employment increased by 32% over the period 1984-94, while employment rose by 17% economy-wide. Recent employment trends in these occupations are favourable.

- Three quarters are telecommunications managers.
- 94% of workers were employed full-time, as work responsibilities for managers require them to be on the job during standard hours.
- The proportion of self-employment is about two thirds the average of all occupations.
- There are somewhat fewer women than the average of all occupational groups, although the percentage of women has increased steadily since 1984.
- There are few young people in the occupation, reflecting educational requirements and the work experience needed for managerial positions.
- The unemployment rate is much lower than the national average.
- Full-time earnings are much higher than the national average reflecting the results of experience and education, and the responsibility given to managers.
- Employment in these occupations is influenced by business conditions but is not seasonal.

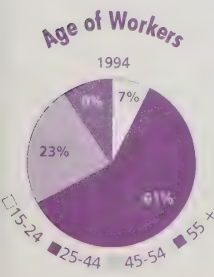
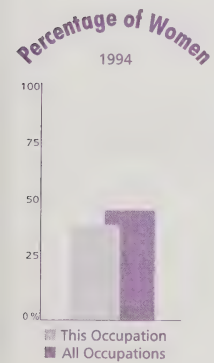
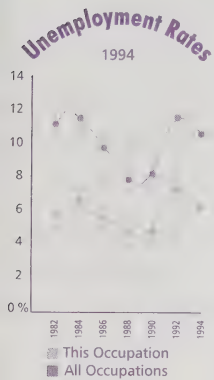
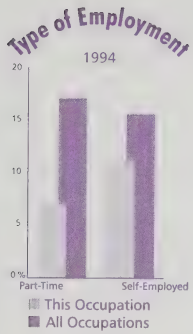
**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this group are expected to remain good through the year 2000.

- With rapidly changing telecommunications technology, individuals with both formal education and specific experience in information technology will be more successful in the job market.
- Electronic products, telecommunications, postal and courier services are expected to continue to supply most of the job growth for this group, although managers in this field are expected to experience strong growth in demand for their services across almost all industries.

See also: This Occupation Code: 013.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U86, C14.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

# Auditors, Accountants and Investment Professionals

## At Work

People in this group work in auditory and accounting firms, government, banks, trust companies, investment and underwriting firms, stock and mortgage brokerages, commodity exchanges and other organizations. They may also be self-employed.

- Financial auditors examine and analyze accounting and financial records.
- Accountants plan, set up and administer accounting systems.
- Financial and investment analysts collect and analyze financial data to provide advice for their clients.
- Financial planners develop financial plans for clients.
- Securities agents and investment dealers and advisors buy and sell stocks, bonds and other securities for clients.
- Traders buy and sell stocks, commodity futures and other securities at stock exchanges on behalf of investment dealers.
- Financial examiners and forensic investigators examine financial records to ensure compliance with legislation and regulations.
- Financial investigators investigate trading activities.
- Investment underwriters underwrite new issues of stocks/bonds.
- Trust officers administer estate and other trusts.
- Mortgage brokers apply for loans on behalf of clients.

## Where They Work



## Education, Training and Experience

People in this group usually require a college diploma or bachelor's degree in economics, commerce, business administration or a related field.

- They usually also need industry courses and several years' on-the-job training.
- Most require provincial licences and certification by their professional associations.
- With experience, they may progress to senior management positions.

## Full-Time Earnings

1993

\$62,100

\$38,700

\$17,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

183,000 workers were employed in this group in 1994 — 51% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are highly favourable.

- Almost 70% are financial auditors and accountants.
- 90% of workers are employed full-time.
- Self-employment increased considerably from 1984 to 1994 and is now near the economy-wide proportion at 14%.
- The share of women employed in this group is higher than the economy-wide average.
- There are few young workers, reflecting the work experience and schooling required for these positions.
- The unemployment rate is about half the national average.
- Full-time earnings are higher than average levels but lower than for other business and finance professionals.
- Employment in these occupations is moderately affected by economic conditions but is not seasonal.

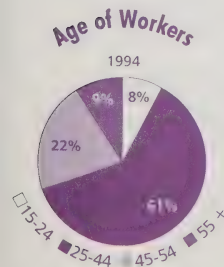
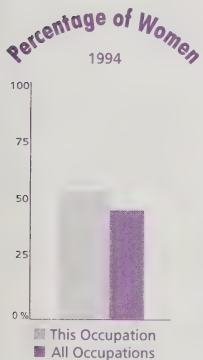
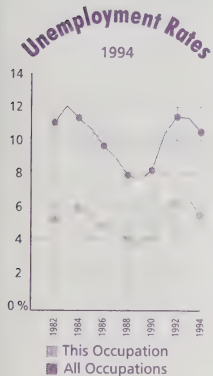
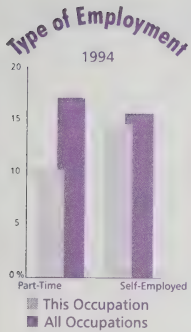
**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this group will worsen somewhat over the next five years but remain good.

- There will be a great many qualified school-leavers seeking to enter these occupations, leading to increasing competition for job openings.
- Most industries use computerized financial systems to monitor business finances. Other related applications that are being used are electronic funds transfer, automatic teller machines and electronic data interchange. These applications will lead to new skill requirements.
- Job growth is expected to be moderate over the next five years and centred in professional business services and finance.

See also: This Occupation Code: 111. Related Code: 1111.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, C11, C12.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?



# Financial Auditors and Accountants

## At Work

People in this occupation work in government and in auditing and accounting firms throughout the private sector. They may also be self-employed.

- Financial auditors examine the accounting and financial records of individuals and establishments. They analyze records such as bank statements, tax returns and ledger entries for accuracy and to ensure they comply with proper accounting procedures.
- Accountants plan, organize and administer accounting systems and prepare financial information for individuals, companies and other organizations.

## Full-Time Earnings

1993

\$57,900

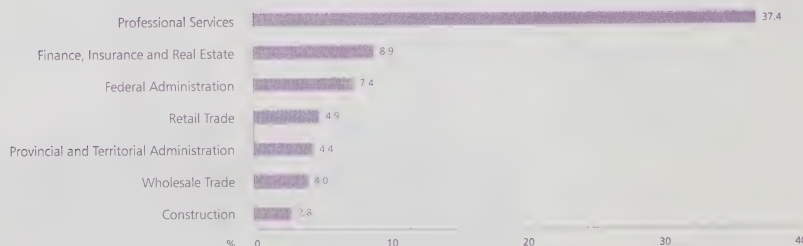
\$34,900

\$17,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this occupation must generally complete some college or university education related to accounting, an accredited professional accounting program and several years' on-the-job training. As well, they must be accredited by their professional associations and usually require a provincial or territorial licence to practise public accounting.

- Financial auditors must complete the requirements to be an accountant plus have some experience as an accountant. They may also require accreditation by the Institute of Auditors.
- Chartered accountants must have a university degree and be accredited by the Institute of Chartered Accountants. In Quebec, they must be members of L'Ordre des comptables agréés du Québec.
- Certified general accountants must be accredited by the Certified General Accountants' Association. In Quebec, they must be members of L'Ordre des comptables généraux licenciés du Québec.
- Certified management accountants must be accredited by the Society of Management Accountants. In Quebec, they must be members of L'Ordre professionnel des comptables en management accrédités du Québec.
- With experience, people in this occupation can progress to management positions in auditing and accounting.

## About this Occupation

124,000 workers were employed in this occupation in 1994 — 51% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 93% of workers are employed full-time, reflecting working conditions which require these professionals to be on the job during standard hours.
- The proportion of women is slightly below the average for all occupations.
- There are few young workers, reflecting the education, training and work experience required for these positions.
- The unemployment rate is about half the national average.
- Full-time earnings are higher than average, as a result of education and experience, and responsibilities of professionals.
- Employment is moderately affected by business conditions but is not seasonal.

**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

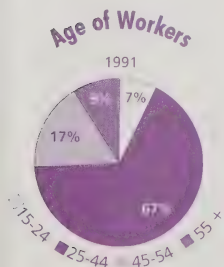
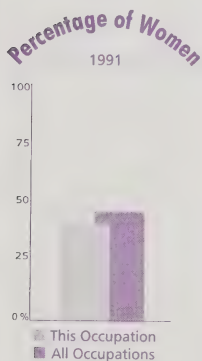
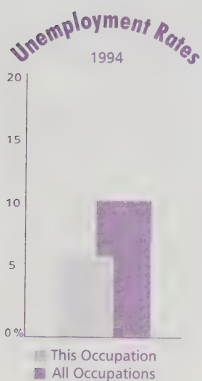
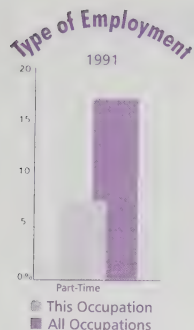
## Looking to the Year 2000

Labour market conditions in this occupation will worsen somewhat over the next five years but remain good.

- Competition for job openings will be keen, with more qualified school-leavers and experienced workers than there are job openings.
- Most industries use computerized financial systems to monitor business finances. Other applications that are being used are electronic funds transfer, automatic teller machines and electronic data interchange. These will all lead to new skill requirements for these professionals.
- Although most industries should increase employment requirements, over half of the new jobs created are expected to be in professional business services, finance and retail trade.

See also:

This Occupation Code: 1111. Related Code: 111.  
Vol. 2 Field of Study Cross-index: M11, U11, C11, C12, C14.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Human Resources and Business Service Professionals

## At Work

People in this group work in government and throughout the private sector including management consulting firms and advertising agencies. They may also be self-employed.

- Human resources specialists develop, carry out and evaluate human resources and labour relations policies, programs and procedures, and advise on personnel matters.
- Management consultants research, analyze and provide advice on managerial methods and organizations and propose improvements in areas such as operations, human resources and communications.
- Advertising and marketing consultants analyze and provide advice on advertising and marketing strategies. They may also plan, develop and implement advertising campaigns for print or electronic media.

This occupational group also includes human resources specialists such as job and wage analysts, classification and equity officers, labour relations officers and union representatives, and business service professionals such as advertising account executives, business methods analysts, organization analysts, promotion specialists and organization and methods researchers.

## Full-Time Earnings

1993

\$61,500

\$41,200

\$20,600

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group usually require a college diploma or university degree in their specialty.

- Some may require graduate degrees.
- With experience, they may progress to management positions.

## About this Occupation

51,000 workers were employed in this group in 1994 — 49% more than in 1984. During the same period employment grew by 17% economy-wide. Recent employment trends in these occupations are highly favourable.

- Half are specialists in human resources, the other half are business service professionals.
- 92% of workers are employed full-time.
- Self-employment has increased since 1984, and now is close to the national average.
- The proportion of women in this occupational group has increased greatly since 1984 and now is higher than the national average.
- There are few young workers, reflecting the work experience and formal education required for these positions.
- The unemployment rate is about half the national average.
- Full-time earnings are higher than average and are higher than for other professional occupations in business and finance.
- Employment is only moderately affected by business conditions and is not seasonal.

**Current labour market conditions are good for this occupational group despite weakness remaining from the 1991-92 recession.**

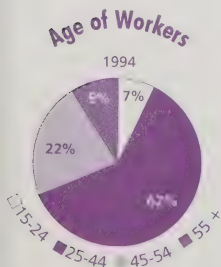
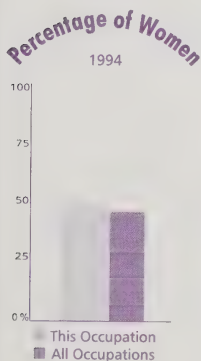
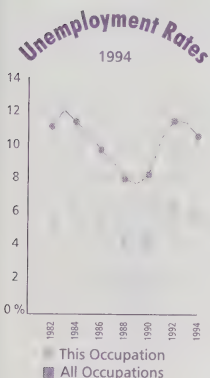
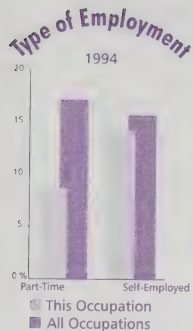
## Looking to the Year 2000

Labour market conditions are expected to worsen over the next five years but remain good.

- Competition for job openings will be keen, with many qualified school-leavers seeking to enter these occupations.
- Computerized human resource systems and management systems will increase the skill needs of these professionals.
- Job growth is dispersed over all industries. However, top job generators are expected to be professional and other business services, advertising and finance.

See also:

This Occupation Code 112. Related Codes: 1121, 1122.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, C11, C14.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Specialists in Human Resources

## At Work

Specialists in human resources work throughout the private sector and in government. They may also be self-employed. Their duties may require them to:

- Develop, implement and evaluate personnel and labour relations policies, programs and procedures;
- Administer benefit, employment equity and affirmative action programs;
- Negotiate collective agreements and mediate labour disputes and grievances;
- Prepare occupational classifications, job descriptions and salary scales;
- Advise managers and employees on personnel policies, benefit programs and collective agreements; and
- Co-ordinate employee performance appraisal programs.

## Full-Time Earnings

1993

\$57,000

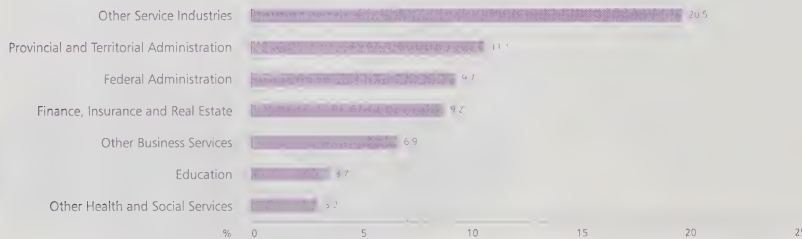
\$40,100

\$23,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Specialists in human resources must complete either a university degree or college diploma in a field related to personnel management, such as business administration, industrial relations, commerce or psychology, or a professional development program in personnel administration.

- They may be required to gain some experience in a clerical or administrative position related to personnel administration.
- With experience, they may progress to management positions.

## About this Occupation

26,000 workers were employed in this occupation in 1994 — 31% more than in 1984. During the same period employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 95% of workers are employed full-time, reflecting working conditions that require these professionals to be on the job during standard hours.
- Almost half of these workers are women, about the average for all occupations.
- There are very few young workers, reflecting the work experience and formal education required for these positions.
- The unemployment rate is less than half the national average.
- Full-time earnings are well above the national average.
- Employment is moderately affected by economic conditions but is not seasonal.

**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

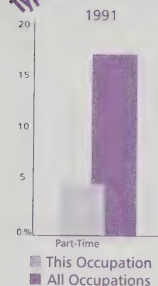
Labour market conditions in this occupation will worsen somewhat over the next five years but remain good.

- Competition for job openings will be keen due to an increasing supply of qualified school-leavers.
- Computerized human resource systems to maintain employee information will increase the skill needs of these professionals.
- Although employment opportunities are spread across most industries, business services, advertising and the finance industry are expected to lead in the numbers of jobs created for this occupation over the next five years.

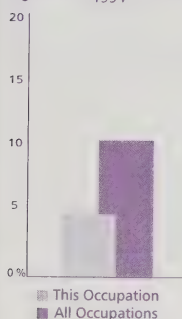
See also:

This Occupation Code: 1121. Related Code: 112.  
Vol. 2 Field of Study Cross-index: M11, U11, U86, U89, C14.  
For further information, see List of Associations.

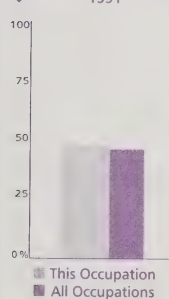
### Type of Employment



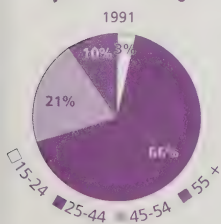
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Professional Business Services to Management

## At Work

People in these occupations work in management consulting firms, advertising agencies and throughout the private sector and government. They may also be self-employed.

- Management consultants analyze the effectiveness of the managerial methods and organization of public and private sector organizations. They propose improvements to methods, systems and procedures in areas such as operations, human resources and communications. They may also plan the reorganization of the operation of an organization.
- Advertising and marketing consultants analyze the advertising needs and current marketing strategies of public and private sector establishments. They advise, develop and implement advertising campaigns for print and electronic media.

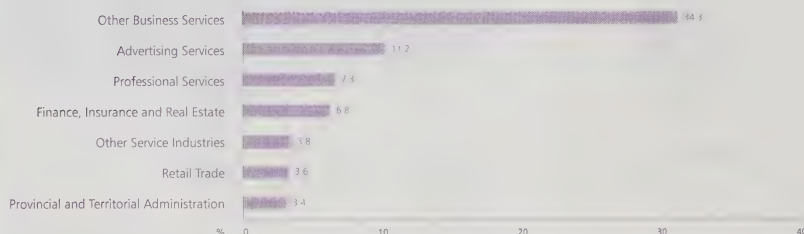
## Full-Time Earnings

1993



\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in these occupations usually require a bachelor's degree or college diploma in business administration or commerce.

- They may need a graduate degree in business administration.
- Management consultants may require certification by a provincial management consulting association.
- With experience, they may progress to senior and managerial positions.

## About these Occupations

25,000 workers were employed in these occupations in 1994 — up 71% from 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are highly favourable.

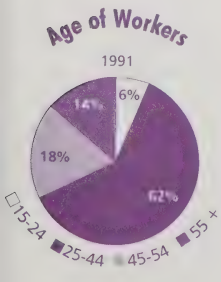
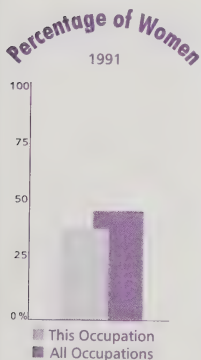
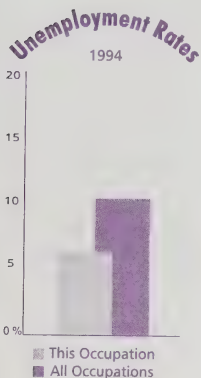
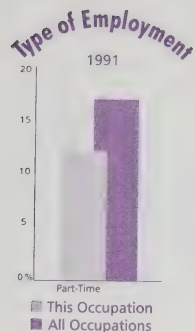
- 88% of workers are employed full-time, less than in other professional occupations in business and finance.
- Almost 40% of these workers are women, slightly less than the average of all occupations.
- There are few young workers, reflecting the experience and formal education required for these professional positions.
- The unemployment rate is much less than the national average.
- Full-time earnings are well above the national average.
- Employment is moderately affected by economic conditions but is not seasonal.

**Current labour market conditions in these occupations are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations will worsen somewhat over the next five years but remain good.

- Competition for job openings will be keen, as there is an increasing number of qualified school-leavers and experienced workers compared to job openings.
- Computerized management systems will increase the skill needs for these professionals.
- Employment for these occupations is concentrated in the area of finance, professional and other business services, and in advertising, retail trade and other service industries. Most employment growth is expected in these industries.



**See also:** This Occupation Code: 1122. Related Code: 112.  
Vol. 2 Field of Study Cross-index: M11, U11, U85, U89, C14.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting  
Better

Stable

Getting  
Worse

How will  
labour market  
conditions  
change  
in this  
group?





# Clerical Supervisors

## At Work

People in this occupational group work in government and in the private sector. They supervise general office and administrative support clerks, finance and insurance clerks, library, correspondence and other information clerks, clerks who work in shipping, receiving and dispatching, and mail and postal clerks, letter carriers, couriers and messengers. Their duties may require them to:

- Co-ordinate, assign and review work done;
- Establish work schedules and procedures;
- Co-ordinate activities with other work units or departments;
- Resolve work-related problems;
- Prepare and submit progress and other reports;
- Train workers in job duties, safety procedures and company policies;
- Requisition supplies and materials; and
- Ensure smooth operation of computer systems, equipment and machinery.

This occupational group also includes registry supervisors, chief telephone operators, credit, payroll and savings supervisors, billing unit heads, claims adjustor supervisors, customer service supervisors, postal station supervisors, postmasters, head dispatchers and shippers, and traffic control supervisors.

## Full-Time Earnings

1993

\$42,100

\$34,900

\$19,600

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These supervisors must have a high school diploma.

- They usually require experience in the occupations they are supervising.
- They may also need completion of a college program or courses related to the occupations they are supervising.

## About these Occupations

99,000 workers were employed in this group in 1994 — 21% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 38% supervise finance and insurance clerks, 28% supervise general office clerks.
- 16% of clerical supervisors are employed part-time, slightly below the average for all occupations.
- The proportion of self-employed workers is about half the average for all occupations.
- 54% of clerical supervisors are women, somewhat more than the work force average.
- The age distribution is similar to the average for all occupations.
- The unemployment rate is less than the national average.
- Full-time earnings are slightly below average levels.
- Employment in this occupational group is sensitive to economic conditions but is not seasonal.

**Current labour market conditions in this occupational group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for clerical supervisors will remain fairly good through the year 2000.

- Technological change will have a negative effect on the occupational group due to the use of office equipment technologies such as personal computers, electronic mail, facsimile machines and related software. However, these changes will lead to skills upgrading.
- This group is expected to experience employment losses in federal administration and postal services. Slow to moderate employment growth is expected across most industries, led by finance, insurance and real estate, professional business services and retail trade.

## Work Prospects

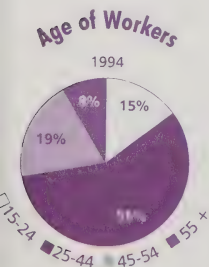
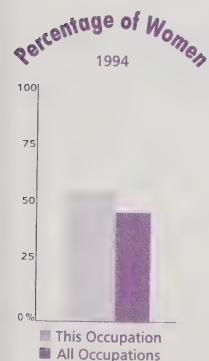
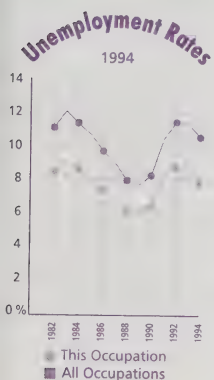
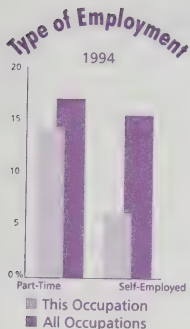
1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



See also: This Occupation Code: 121.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, C12, C14.  
For further information, see List of Associations.



# Administrative and Regulatory Occupations

## At Work

People in these occupations work throughout the private and public sectors.

- Administrative officers plan, co-ordinate and implement services such as work priorities, schedules and procedures.
- Executive assistants carry out administration procedures, public relations and other activities for boards, legislators, senior government officials and executives.
- Personnel and recruitment officers advertise job vacancies, recruit candidates and help select and reassign employees.
- Property administrators carry out management and rental activities of investment properties on behalf of owners.
- Purchasing agents and officers buy equipment, materials and business services for organizations.
- Conference and event planners plan, organize and co-ordinate conferences, meetings, festivals and similar events.
- Immigration, unemployment insurance and revenue officers administer and enforce related laws and regulations.

This occupational group also includes justices of the peace and court officers.

## Full-Time Earnings

1993

\$59,000

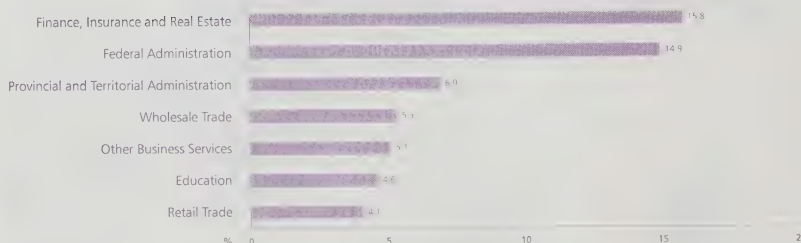
\$39,300

\$20,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$39,300 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group must have a high school diploma and usually require a college diploma or university degree in their area of work.

- Personnel and recruitment officers may substitute a personnel administration development program offered by a professional association for college or university programs.
- Conference and event planners may replace experience in hospitality and tourism or public relations for college and university programs.
- Property administrators may need training or vocational courses in addition to a high school diploma.

## About these Occupations

189,000 workers were employed in this group in 1994 — 34% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 55% work as administrative officers.
- 90% of these workers are employed full-time.
- The proportion of self-employed workers in this group is somewhat below the average of all occupations.
- Women make up 50% of these workers, somewhat more than the average of all occupations.
- There are few young workers, reflecting the educational requirements and experience needed for these occupations.
- The unemployment rate in this group is much below the national rate.
- Full-time earnings are considerably higher than average levels and are by far the highest among the skilled administrative and business occupations.
- Employment in these occupations varies moderately with economic conditions but is not seasonal.

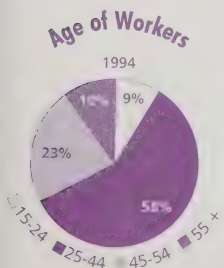
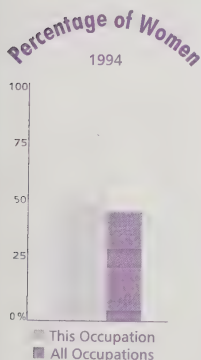
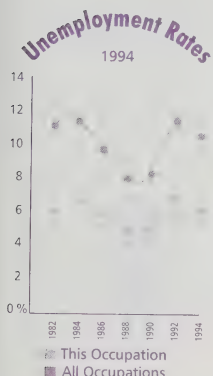
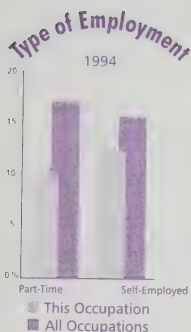
**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this group will worsen somewhat over the next five years but remain good.

- Technological change will have a negative effect on this occupational group due to the use of specialized computer systems. Despite the trend toward re-engineering the workplace, some administrative occupations which use specialized skills in data or communications are expected to be areas of growth for this occupational group.
- Finance, the group's largest employer, should continue to lead in the number of jobs created for this occupation. Retail and wholesale trade are also expected to generate strong job growth for this group. Less employment is expected from federal administration and postal services.

See also: This Occupation Code: 122. Related Codes: 1221, 1225.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U85, C14.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





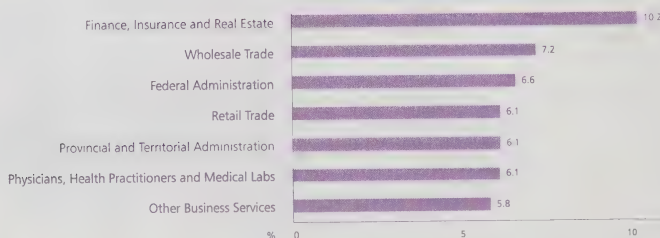
# Administrative Officers

## At Work

Administrative officers work throughout the private and public sectors. Their duties may require them to:

- Oversee and co-ordinate office administrative procedures and review, evaluate and implement new procedures;
- Establish work priorities, delegate work to staff and ensure deadlines are met;
- Co-ordinate and plan for office services such as accommodation, relocations, equipment, supplies, forms, parking, maintenance and security services;
- Assist in preparation of operating budgets and maintain inventory and budgetary controls; and
- Prepare reports, manuals and correspondence.

## Where They Work



## Education, Training and Experience

Administrative officers must have a high school diploma.

- They may require a university degree or college diploma in business or public administration.
- They usually need experience in a senior clerical or executive secretarial position related to office administration.
- With experience, they may progress to management positions in administrative services.

## Full-Time Earnings

1993

\$55,800

\$38,700

\$20,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

104,000 workers were employed in this occupation in 1994 — 54% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 90% of workers are employed full-time in this occupation.
- 75% of workers in this occupation are women, far more than the national average.
- There are very few young workers, reflecting the educational requirements and experience needed for this occupation.
- The unemployment rate is much lower than the national average.
- Full-time earnings are higher than average.
- Employment in this occupation varies moderately with economic conditions but is not seasonal.

**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

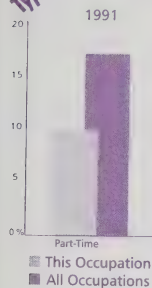
## Looking to the Year 2000

Labour market conditions in this occupation will worsen somewhat over the next five years but remain good.

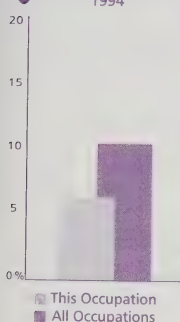
- Technological change will have a negative effect on this occupation because of the use of specialized computer systems. Despite the trend toward re-engineering the workplace, some administrators with specialized skills in data or communications are expected to be more successful in the labour market.
- Wholesale and retail trade, electric and electronic products as well as motor vehicle, trailers and parts manufacturers are expected to provide most of the job growth for this occupation over the next five years. Less employment is expected from federal administration, and employment growth in education will remain weak.

See also: This Occupation Code: 1221. Related Code: 122.  
Vol. 2 Field of Study Cross-index: M11, U11, U85, U86, C14.  
For further information, see List of Associations.

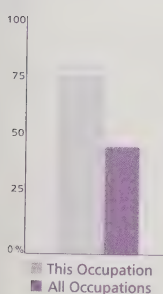
Type of Employment



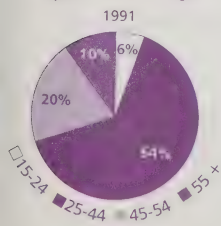
Unemployment Rates



Percentage of Women



Age of Workers



Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Purchasing Agents and Officers

## At Work

People in this group work throughout the private and public sectors. Their duties may require them to:

- Purchase general and specialized equipment, materials and business services;
- Assess the needs of their workplace and develop specifications for required equipment, materials and supplies;
- Invite tenders, consult with suppliers and review quotations;
- Determine contract terms and conditions, and award contracts or recommend contract awards;
- Establish delivery schedules, monitor progress and contact clients and suppliers to resolve problems;
- Specialize in the purchase of particular materials or business services such as furniture or office equipment; and
- Hire, train or supervise clerks.

## Full-Time Earnings

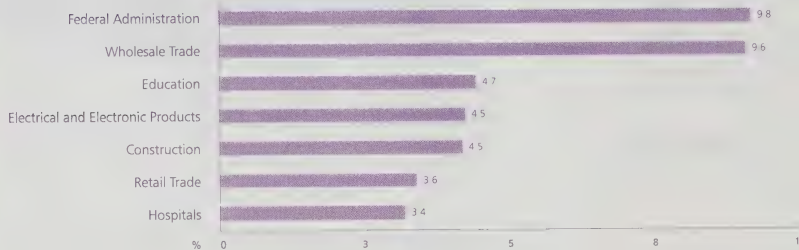
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group usually require a university degree or college diploma in business administration, commerce or economics.

- They may need experience as purchasing or administrative clerks.
- Those who specialize in the purchase of particular materials or business services may require a related university degree or college diploma. For example, a purchaser of industrial products may need a bachelor's degree or college diploma in engineering.
- With experience, people in this group may move to managerial positions.

## About this Occupation

19,000 workers were employed in this occupation in 1994 — 3% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 97% of workers are employed full-time.
- Women make up a somewhat smaller proportion of workers in this occupation than the average of all occupations.
- There are few young workers, reflecting the training and experience required for this occupation.
- The unemployment rate in this occupation is much lower than the national average.
- Full-time earnings are higher than average.
- Employment in this occupation varies moderately with economic conditions and is somewhat seasonal.

**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

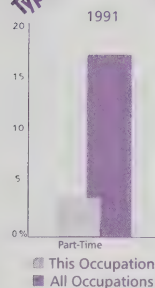
## Looking to the Year 2000

Labour market conditions in this occupation will worsen somewhat over the next five years but remain good.

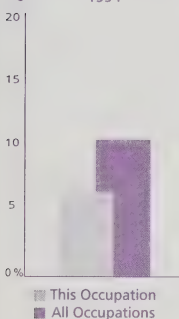
- Technological change will also have a negative effect on this occupation due to the use of specialized computer systems. Purchasing officers with specialized computer skills should be more successful in the labour market.
- Employment is distributed over a variety of industries, with job growth expected to be led by wholesale and retail trade, electric and electronic products manufacturing and construction. Employment in federal administration is expected to fall.

**See also:** This Occupation Code: 1225. Related Code: 122.  
Vol. 2 Field of Study Cross-index: U11, U45, U81, C14.  
For further information, see List of Associations.

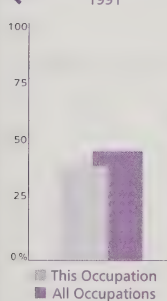
### Type of Employment



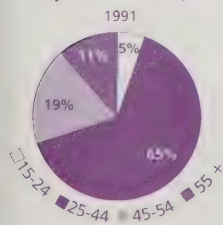
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





# Finance and Insurance Administrative Occupations

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

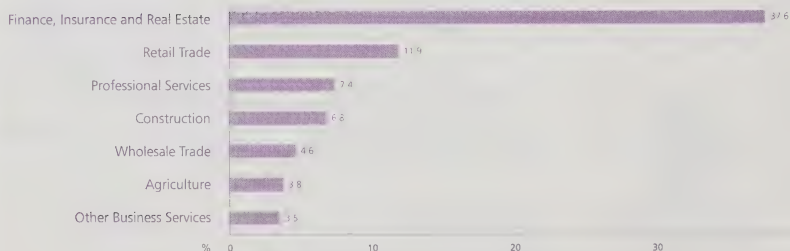
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in these occupations work in government and throughout the private sector including banks, trust companies, credit unions, insurance companies, real estate agencies, and customs, ship and other brokerage firms.

- Bookkeepers maintain records of accounts and other financial transactions using computerized or manual financial record systems.
- Loan officers evaluate and process credit and loan applications.
- Insurance adjusters investigate insurance claims and determine amount of loss or damages covered by policies.
- Insurance claims examiners review insurance claims and authorize payments.
- Insurance underwriters evaluate insurance applications to determine insurance risks, premiums and coverage.
- Assessors estimate the value of land, structures and other assets for taxation, grants and regional planning purposes.
- Valuers analyze financial records of businesses to assess competitiveness and estimate market value.
- Appraisers provide valuations of property, buildings, machinery and other items for various clients.
- Customs brokers clear goods through customs on behalf of clients.
- Ship brokers buy and sell yachts, ships, other vessels and ships' cargo space on behalf of clients.

## Where They Work



## Education, Training and Experience

People in this group must have a high school diploma.

- Most require a college diploma, a university degree or other courses related to their field, or a combination of extensive experience and training in their field.
- Assessors, valuers, some appraisers and insurance underwriters need accreditation or professional recognition from their professional associations.
- Customs brokerage business operators require licences from Customs and Excise.

## About these Occupations

152,000 workers were employed in this group in 1994 — 21% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 57% work as bookkeepers.
- 78% of workers are employed full-time.
- The proportion of self-employed people in these occupations is well below the average for all occupations.
- Women make up two thirds of all workers in these occupations, much higher than the average for all occupations.
- The age distribution is similar to that of the overall work force.
- The unemployment rate is much lower than the national average.
- Full-time earnings are lower than average.
- Employment in this group is sensitive to economic conditions but is not seasonal.

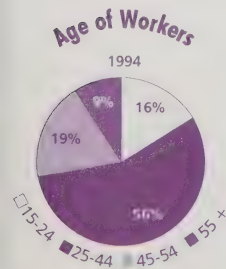
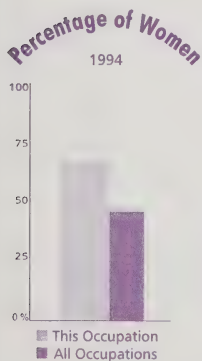
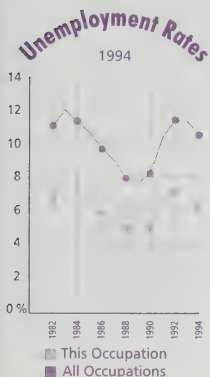
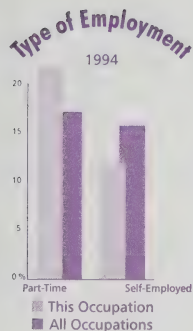
**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain good through the year 2000.

- Technological change will have a negative effect on this occupational group due to the use of property management systems and computerized accounting systems. Workers in these occupations will need to upgrade their computer skills.
- Despite the trend toward re-engineering the workplace, some administrators with specialized skills in data or communications should be more successful in the labour market.
- Wholesale and retail trade, electric and electronic products, motor vehicle and parts manufacturing and construction are expected to be the main source of jobs for this group over the next five years. Employment growth in education and federal administration is expected to remain weak.

**See also:** This Occupation Code: 123. Related Codes: 1231, 1233.  
Vol. 2 Field of Study Cross-index: U11, U81, C11, C12, C14.  
**For further information, see List of Associations.**



## Work Prospects 1995 to 2000

Getting  
Better

Stable

Getting  
Worse

How will  
labour market  
conditions  
change  
in this  
group?



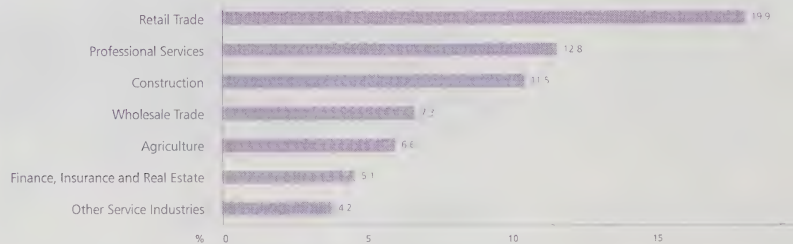
# Bookkeepers

## At Work

Bookkeepers work throughout the private and public sectors. They may also be self-employed. Their duties may require them to:

- Keep financial records and establish, maintain and balance various accounts using manual and computerized bookkeeping systems;
- Post journal entries and reconcile accounts, prepare trial balances of books, maintain general ledgers and prepare financial statements;
- Prepare cheques for payrolls and for utility, tax and other bills;
- Complete and submit tax remittance forms, workers' compensation forms, pension contribution forms and other government documents;
- Prepare tax returns and perform other personal bookkeeping services; and
- Prepare statistical, financial and accounting reports.

## Where They Work



## Education, Training and Experience

Bookkeepers must have a high school diploma.

- They must complete a college program in accounting, bookkeeping or a related field, or two years of a recognized professional accounting program (such as Chartered Accounting or Certified General Accounting), or a combination of courses in accounting or bookkeeping plus several years' experience as a financial or accounting clerk.
- With additional training, they may progress to professional accounting occupations.

## Full-Time Earnings

1993

\$39,100

\$24,700

\$10,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$24,900 is the average for all occupations.

## About this Occupation

87,000 workers were employed in this occupation in 1994 — 12% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 40% of workers are employed part-time, more than double the average for all occupations.
- Women make up 92% of all workers in this occupation.
- There are few young people in this occupation, reflecting the work experience and training required.
- The unemployment rate in this occupation is below the national average.
- Full-time earnings are much lower than the national average.
- Employment in this occupation is sensitive to economic conditions but is not seasonal.

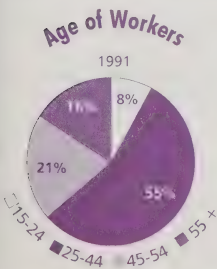
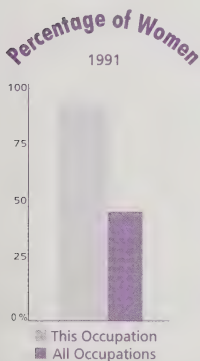
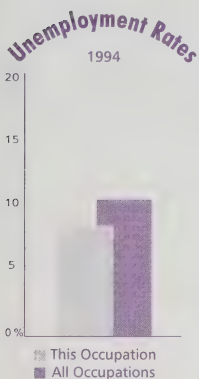
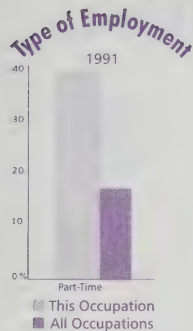
**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation will remain fairly good through the year 2000.

- Technological change will have a negative effect on this occupation due to the use of computerized accounting systems. Bookkeepers with specialized computer skills are expected to be more successful in the labour market.
- Professional business services should surpass retail trade as the leading employer for this group by the year 2000. Both retail and wholesale trade are expected to require fewer workers from this occupation while the area of professional business services expands.

See also: This Occupation Code: 1231. Related Code: 123.  
Vol. 2 Field of Study Cross-index: U11, C11, C12, C14, T12.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





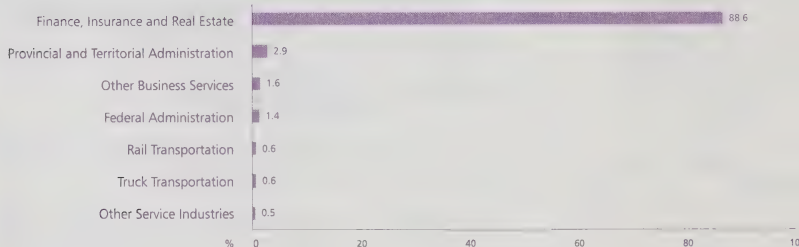
# Insurance Adjusters and Claims Examiners

## At Work

Insurance adjusters work in the claims departments of insurance companies or as independent adjusters. Insurance claims examiners are employed at head offices or branches of insurance companies.

- Insurance adjusters investigate insurance claims and determine the amount of loss or damages covered by insurance policies for automobiles, homes and other properties. They may examine records and reports and consult with claimants, accident witnesses, doctors and other relevant individuals.
- Insurance claims examiners review, examine, calculate and authorize payments for automobile, fire, life, disability, dental and other claims investigated by insurance adjusters. They may ensure claims are valid and settlements made according to company practices and procedures.

## Where They Work



## Education, Training and Experience

People in this occupation must have a high school diploma.

- They must complete a bachelor's degree, college diploma or some education after high school or have several years' experience as a clerk in a claims department or other general insurance experience.
- They must complete several years' on-the-job training and take insurance industry courses and training programs.
- Independent adjusters require a provincial licence issued by the superintendent of insurance in their province or territory of employment.
- People in this group may gain professional recognition as an associate of the Insurance Institute of Canada by completing educational programs from the Institute or its provincial counterparts.

## Full-Time Earnings

1993

\$57,300

\$35,500

\$20,900

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,700 is the average for all occupations.

## About this Occupation

17,000 workers were employed in this occupation in 1994 — 37% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

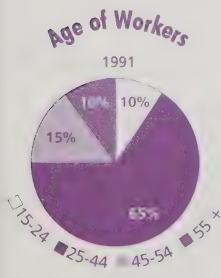
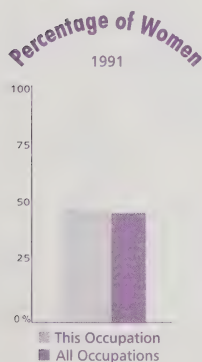
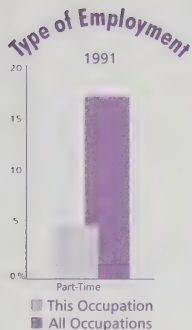
- 95% of workers in this occupation are employed full-time.
- The proportion of women in this occupation is at the average for all occupations.
- There are few young people in this occupation, reflecting the work experience and training required.
- The unemployment rate in this occupation is about half the national average.
- Full-time earnings are slightly above average.
- Employment in this occupation is sensitive to economic conditions and shows some seasonal variation.

**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation will remain good through the year 2000.

- Technological change will have a negative effect on the occupation due to the use of computerized accounting systems and insurance processing. Insurance adjusters with specialized computer skills should be more successful in the labour market.
- Employment is concentrated in the insurance industry which is expected to generate moderate job growth for this occupation over the next five years.



See also: This Occupation Code: 1233. Related Code: 123.  
Vol. 2 Field of Study Cross-index: U11, U85, U89, C14.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

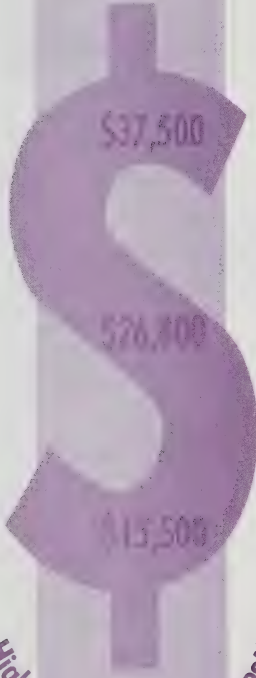
How will labour market conditions change in this group?



# Secretaries, Recorders and Transcriptionists

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$24,900 is the average for all occupations.

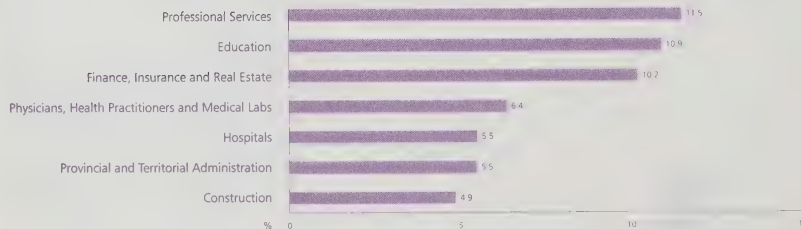
## At Work

Secretaries work in government and throughout the private sector including law offices, company legal departments, real estate companies, land titles offices, courts, doctors' offices, hospitals, clinics and other medical organizations.

- Secretaries perform administrative duties and clerical activities. This includes operating computers, word processors and typewriters to type correspondence and other data from shorthand, machine dictation and written copy.
- Court recorders record verbatim proceedings of courts using stenomasks, stenograph machines, and computerized recording equipment. They locate quotes to ensure accuracy and transcribe recorded proceedings according to established formats.
- Medical transcriptionists record and transcribe surgical proceedings, medical reports and records from machine dictation or rough notes from medical reports, correspondence and patient information.

This occupational group also includes executive, private and technical secretaries, estate, medical, legal, litigation and real estate secretaries, court reporters and stenographers, and Hansard reporters.

## Where They Work



## Education, Training and Experience

Secretaries usually have a high school diploma.

- Secretaries (except legal and medical) must complete a one-to-two-year college, or other, program or have previous clerical experience.
- Court recorders and medical transcriptionists must complete high school and a college or other program in court reporting or medical transcription.
- Legal secretaries usually must complete a one-to-two-year college or other program for secretaries or legal secretaries.
- Medical secretaries usually must complete a one-to-two-year college program or other specialized course for secretaries or medical secretaries.

## About these Occupations

421,000 workers were employed in this group in 1994 — 3% of the total work force. Employment in these occupations dropped 1% from 1984 to 1994, while employment grew by 17% economy-wide. Recent employment trends in this occupational group are very unfavourable.

- 80% of workers in this group are secretaries.
- The proportion of part-time workers in this group is slightly below the average for all occupations.
- There is very little self-employment in these occupations.
- Women make up 92% of all workers in these occupations.
- There are relatively few young workers in these occupations, due to stationary employment levels.
- The unemployment rate is considerably lower than the national average but somewhat higher than for comparable occupations.
- Full-time earnings are three quarters of the average for all occupations, the lowest in the skilled administrative and business occupations group.
- Employment is moderately affected by business conditions but is not seasonal.

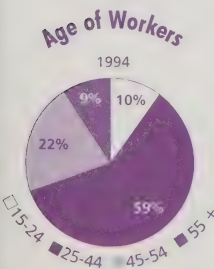
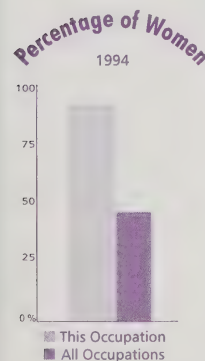
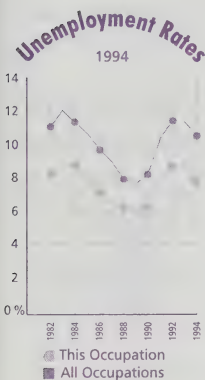
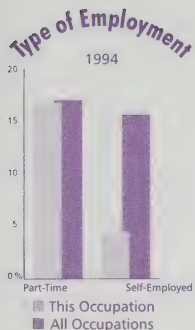
**Current labour market conditions in this occupational group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations will worsen over the next five years but remain fairly good.

- Technological change will have a negative effect on this occupational group with the continuing growth of computerized office equipment technologies. Despite the trend toward re-engineering the workplace, experienced secretaries with specialized skills in data or communications are expected to be more successful in the labour market.
- Overall employment is expected to show little growth over the next five years. The areas of education, federal, provincial and local administration and finance, insurance and real estate should see declining employment. Employment growth is expected in areas such as professional business services, hospitals and medical laboratories.

**See also:** This Occupation Code: 124. Related Codes: 1242, 1243. Vol. 2 Field of Study Cross-index: U11, C14, C110, T16. For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





# Legal Secretaries

## At Work

Legal secretaries work in government, law offices, legal departments of large firms, real estate companies, land title offices and courts at the municipal, provincial and federal levels. Their duties may require them to:

- Type correspondence and legal documents such as deeds, wills and affidavits from handwritten copy, shorthand and machine dictation using typewriters, word processors and computers;
- Schedule appointments, meetings and conferences;
- Set up and maintain filing systems, using their knowledge of legal records and procedures;
- Handle confidential materials and documents;
- Open and distribute mail and other documents, co-ordinate the flow of information in-house and with other organizations;
- Review and proofread outgoing documents to ensure that they comply with legal procedures and grammar;
- Attend court, meetings and conferences to take notes, minutes and dictation; and
- Perform other general office work including supervising office workers.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Legal secretaries usually must have a high school diploma.

- They usually must complete a one-to-two-year college or other program for secretaries or legal secretaries.

## About this Occupation

37,000 workers were employed in this occupation in 1994 — 3% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- 11% of legal secretaries work part-time, well below the average for all occupations.
- 99% of legal secretaries are women.
- The age distribution is more heavily weighted toward persons 25 to 44 years old than the overall work force.
- The unemployment rate for legal secretaries is much lower than the national average.
- Full-time earnings are lower than average levels.
- Employment in this occupation is moderately sensitive to economic conditions and is not seasonal.

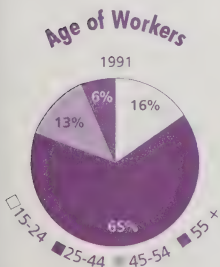
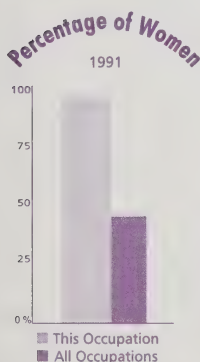
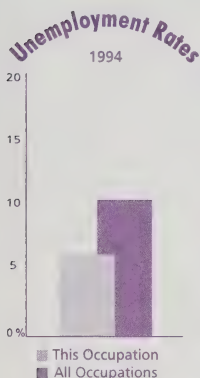
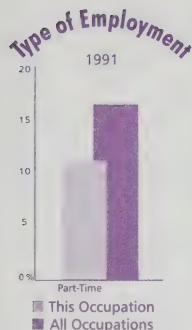
**Current labour market conditions for legal secretaries are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen from good to fairly good over the next five years.

- Technological change will have a negative effect on this occupation because of the use of office equipment technology such as personal computers, electronic mail, facsimile machines and related software. These changes will lead to skills upgrading for all secretarial workers.
- Experienced legal secretaries with computer skills are expected to be more successful in the labour market.
- While employment losses are expected in provincial administration and finance, insurance and real estate, most employment growth for legal secretaries is expected to be in the area of private law practices.

**See also:** This Occupation Code: 1242. Related Code: 124.  
Vol. 2 Field of Study Cross-index: C14, C111, T12, T16, T17.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Medical Secretaries

## At Work

Medical secretaries work in doctors' offices, hospitals, medical clinics and in other medical settings. Their duties may require them to:

- Schedule and confirm medical appointments and receive and communicate messages for doctors and patients;
- Type medical records, reports, articles, case histories and correspondence from handwritten notes, shorthand and machine dictation using typewriters, word processors and computers;
- Interview patients to complete forms, documents and case histories;
- Complete insurance and other claim forms;
- Initiate and maintain confidential medical files and records;
- Prepare financial statements and handle billing procedures;
- Order supplies and maintain inventory; and
- Perform other general office work.

## Full-Time Earnings

1993

\$33,300

\$25,700

\$15,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Medical secretaries usually must have a high school diploma.

- They usually must complete a one-to-two-year college program or other specialized courses for secretaries or medical secretaries.

## About this Occupation

37,000 workers were employed in this occupation in 1994 — 18% more than in 1984, almost the same as the employment growth of 17% economy-wide for the same period. Recent employment trends in this occupation are unfavourable.

- 24% of medical secretaries work part-time, well above the average for all occupations.
- 99% of medical secretaries are women.
- There are relatively few young workers, compared to the overall work force.
- The unemployment rate for medical secretaries is well below the national average.
- Full-time earnings are lower than average levels.
- Employment in this occupation is moderately sensitive to economic conditions and is not seasonal.

**Current labour market conditions for medical secretaries are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for medical secretaries will worsen over the next five years but remain good.

- Technological change will have a negative effect on this occupation due to the use of office equipment technology such as personal computers, electronic mail, facsimile machines and related software. These changes will lead to skills upgrading for all secretaries.
- Private health care practices continue to be the centre for job creation in this occupation, although job growth in hospitals and other health and social services will continue to be important.

## Work Prospects

1995 to 2000

Getting Better

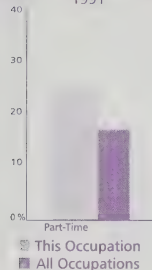
Stable

Getting Worse

How will labour market conditions change in this group?

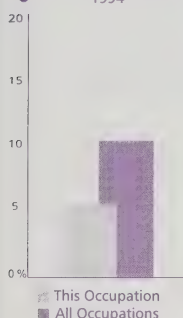
### Type of Employment

1991



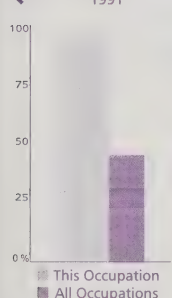
### Unemployment Rates

1994



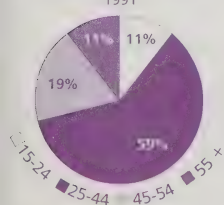
### Percentage of Women

1991



### Age of Workers

1991



**See also:** This Occupation Code: 1243. Related Code: 124.  
Vol. 2 Field of Study Cross-index: C14, C112, T12, T16, T17.  
For further information, see List of Associations.





# Clerical Occupations, General Office Skills

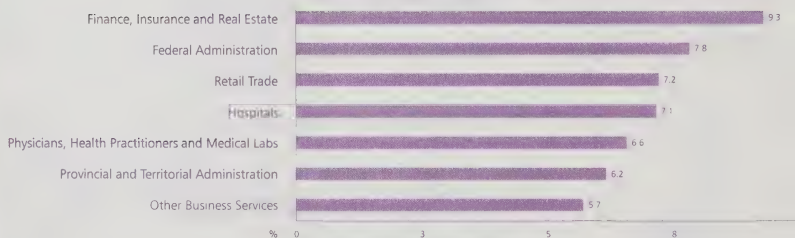
## At Work

People in this group work for government and the private sector.

- General office clerks type and file documents, attend to phone and counter enquiries, open and sort mail and perform other routine office duties.
- Word processing operators and typists use word processors, computers and typewriters to format, type documents, proofread documents and perform other duties such as photocopying and filing.
- Records clerks process, code, classify, store and retrieve documents using computerized and manual information retrieval systems.
- Health records technicians classify, code, cross-reference and store health records and related data in hospitals, clinics and other health care institutions.
- Receptionists greet people, schedule appointments, provide information and perform related clerical duties.

This occupational group also includes administrative and office assistants, dicta-typists, teletype operators, hospital admitting clerks, switchboard operators, answering service operators and microfilm records searchers.

## Where They Work



## Education, Training and Experience

People in these occupations usually complete high school and a college or other program related to their area of work.

- General office clerks and receptionists may be required to type or operate word processors.
- Word processing operators and typists must be able to type and operate word processing software.
- Health records technicians must complete a two-to-three-year college or other program in health records management and be certified by the Canadian Health Record Association. This certification allows them to work in all provinces and territories.

## Full-Time Earnings

1993

\$40,200

\$27,700

\$34,900

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

356,000 workers were employed in this group in 1994 — 11% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- 52% are general office clerks, and 32% are receptionists.
- 21% in this occupational group work part-time, somewhat more than the average for all occupations.
- Very few clerical workers are self-employed.
- 76% of workers in these clerical occupations are women.
- The age distribution of these clerical workers is very similar to the overall work force.
- The unemployment rate for this occupational group is slightly below the national average.
- Full-time earnings are much lower than average levels and are among the lowest for clerical occupations.
- Employment in these occupations is moderately sensitive to business conditions but is not seasonal.

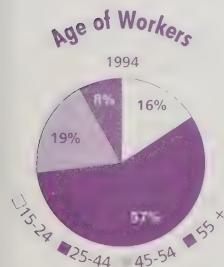
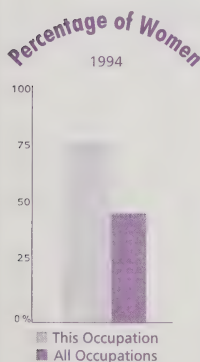
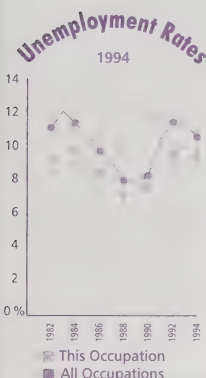
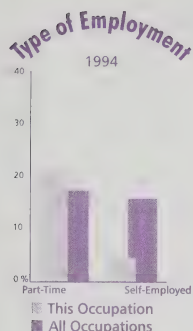
**Current labour market conditions in this occupational group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this group will remain fairly good through the year 2000.

- Technological change will have a negative effect on the occupational group, due to the use of office equipment technology such as personal computers, electronic mail, facsimile machines and related software. These changes will lead to skills upgrading.
- Clerks with specialized computer skills are expected to be more successful in the labour market.
- Employment is distributed over a large variety of industries, with relatively strong growth expected in finance, insurance, real estate and retail trade. Federal and provincial administrations are expected to require fewer clerical workers.

See also: This Occupation Code: 141.  
Vol. 2 Field of Study Cross-index: U11, C14, C110, T16.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Office Equipment Operators

## At Work

People in this group work in government and the private sector including telephone and commercial printing companies, magazine publishers and typesetting firms.

- Computer operators use computer equipment to produce reports, monitor the operation of computer systems and networks, and schedule their use.
- Data entry clerks type at keyboards and data entry consoles to input data on diskettes, disks and tapes, and maintain libraries of these items.
- Typesetters operate keyboards to enter copy into typesetting systems or use typesetting output equipment to produce text ready to print.
- Desktop publishing operators use desktop publishing software and equipment to design, lay out and produce camera-ready copy.
- Mark-up persons mark copy with computer codes and instructions before typesetting.
- Telephone operators use computerized and conventional telephone systems to advance and assist customers' phone calls.
- Telephone service observers develop and give telephone operator training courses and monitor the work of telephone operators.

## Full-Time Earnings

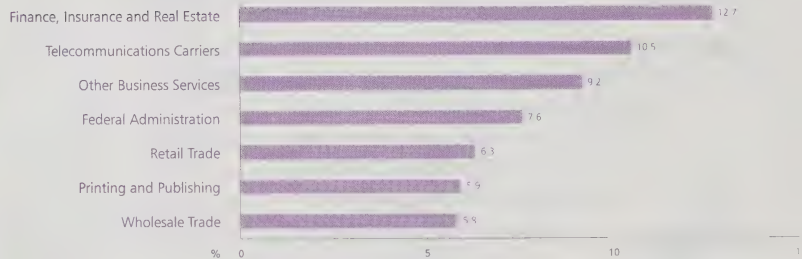
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group must complete some high school or have a high school diploma.

- Typesetters and desktop publishing operators must have a high school diploma and usually require a college program in graphic arts or other training in typography, computer typesetting or desktop publishing.
- Typesetters require typing or data entry experience.
- Mark-up persons usually have a high school diploma.
- Telephone operators receive on-the-job training.
- Telephone service observers must usually have experience as telephone operators.
- With experience, people in this group may progress to supervisory positions.

## About these Occupations

109,000 workers were employed in this group in 1994 — 1% fewer than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are very unfavourable.

- 57% are data entry clerks, and 26% are computer operators.
- 14% of office equipment operators work part-time, slightly below the average of all occupations.
- Few office equipment operators are self-employed.
- 63% of those working in this occupational group are women, a much higher proportion than the average.
- The age distribution is similar to the overall work force.
- The unemployment rate for this group is slightly lower than the national average.
- Full-time earnings in this occupation are below average levels.
- Employment in these occupations is somewhat sensitive to economic conditions but is not seasonal.

**Current labour market conditions in this group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations will improve somewhat over the next five years but remain fairly good.

- Technological change has had a positive effect on the occupational group, as more computer skills are required to complement secretarial work. However, the ease of use of computer software packages may slow the increase in demand for these operators.
- This group is expected to experience strong employment growth in retail and wholesale trade as well as finance, insurance and real estate, while employment in telecommunications and other business services declines.

## Work Prospects

1995 to 2000

Getting Better

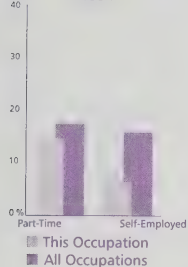
Stable

Getting Worse

How will labour market conditions change in this group?

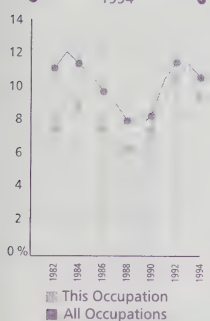
### Type of Employment

1994



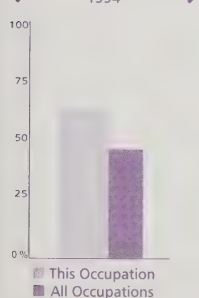
### Unemployment Rates

1994



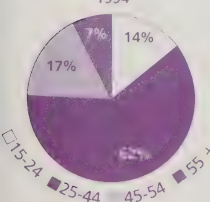
### Percentage of Women

1994



### Age of Workers

1994



**See also:** This Occupation Code: 142. Related Codes: 1421, 1422.  
Vol. 2 Field of Study Cross-index: U11, U81, C71, C110, T16.  
**For further information, see List of Associations.**





# Computer Operators

## At Work

Computer operators work in computer centres throughout the public and private sectors. Their duties may require them to:

- Operate computer equipment such as terminals, tape drives, disk drives and printers;
- Operate master consoles to monitor the operation of computer systems and networks;
- Load computer tapes and disks and install software and printer paper and forms;
- Operate spreadsheet programs and other types of software to load and manipulate data and produce reports;
- Co-ordinate and schedule the use of computer terminals and networks;
- Report computer malfunctions to computer maintenance technicians; and
- Distribute computer output to users.

This occupation also includes computer tape librarians, master console operators, network controllers and operators, peripheral operators and system operators.

## Full-Time Earnings

1993

\$44,300

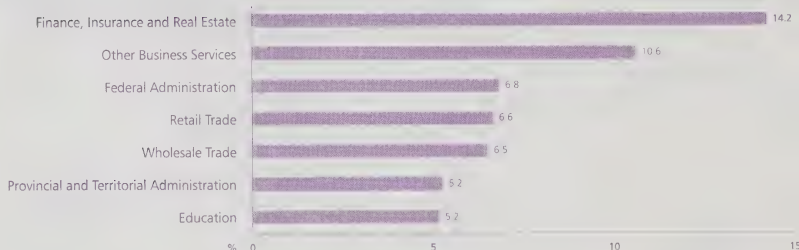
\$32,600

\$18,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$24,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Computer operators usually must have a high school diploma.

- They usually complete college or other courses in computer operations or network administration.
- With additional training and experience, they may progress to supervisory positions.

## About this Occupation

28,000 workers were employed in this occupation in 1994 — 10% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- 92% of computer operators work full-time.
- 57% of computer operators are women, somewhat more than the average for all occupations.
- There are somewhat more young workers than in the overall work force.
- The unemployment rate for computer operators is less than the national average.
- Full-time earnings are lower than average levels.
- Employment in this occupation is somewhat sensitive to economic conditions but is not seasonal.

**Current labour market conditions for computer operators are fairly good despite remaining weakness from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for computer operators will improve somewhat over the next five years but remain fairly good.

- Technological change has had a positive effect on the occupation. However, the ease of use of computer software packages may slow the increase in demand for these operators.
- Growth in employment is expected to be led by retail and wholesale trade and finance, insurance and real estate, although employment gains are spread over most industries.

## Work Prospects

1995 to 2000

Getting Better

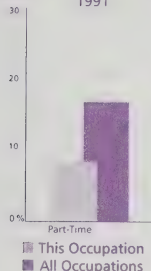
Stable

Getting Worse

How will labour market conditions change in this group?

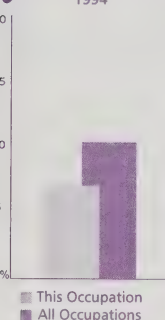
### Type of Employment

1991



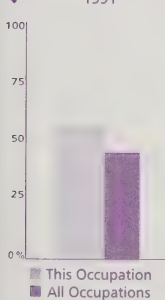
### Unemployment Rates

1994



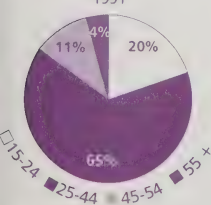
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 1421. Related Code: 142.  
Vol. 2 Field of Study Cross-index: U11, U73, U81, C71, C110.  
For further information, see List of Associations.



# Data Entry Clerks

## At Work

Data entry clerks work in offices and computer centres throughout the public and private sectors. Their duties may require them to:

- Receive and register invoices, forms, records and other documents for data capture;
- Type at keyboards and data entry consoles to input source data onto disks, diskettes and tapes for storage;
- Identify, label and store disks, diskettes and tapes;
- Verify accuracy and completeness of data; and
- Maintain libraries of disks and tapes.

This occupation also includes data control clerks, data processors and payment entry clerks.

## Full-Time Earnings

1993

\$39,300

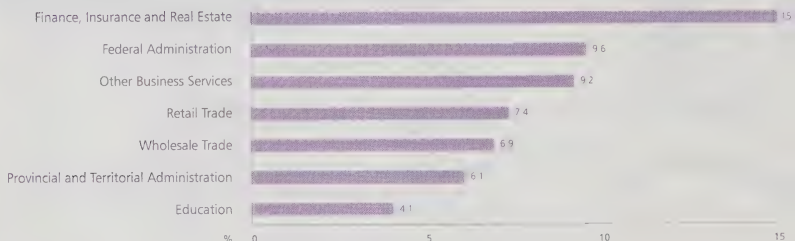
\$27,500

\$16,800

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Data entry clerks may require a high school diploma.

- They may need college or other courses in data entry.
- They usually must be able to type or operate data entry equipment.
- With experience, they may progress to supervisory positions.

## About this Occupation

62,000 workers were employed in this occupation in 1994 — 8% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- 13% of data entry clerks work part-time, somewhat below the average for all occupations.
- 85% of data entry clerks are women.
- There are many more young workers than in the overall work force, reflecting the lower education and training requirements of this occupation.
- The unemployment rate for data entry clerks is about the national average rate.
- Full-time earnings are lower than average levels.
- Employment in this occupation is somewhat sensitive to economic conditions, but is not seasonal.

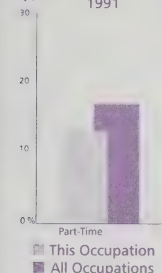
**Current labour market conditions for data entry clerks are fairly good despite remaining weakness from the 1991-92 recession.**

## Looking to the Year 2000

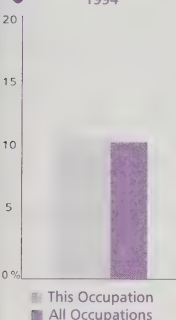
Labour market conditions in this occupation will improve somewhat over the next five years but remain fairly good.

- Technological change has had a positive effect on this occupation, as more operators are required to process information. However, the ease of use of the software packages may slow the increase in demand for data entry clerks as productivity enhancements result in the need for fewer clerks to process data and as professionals and managers operate personal computers.
- Data entry operators with technical skills and knowledge of a variety of software are expected to be more successful in the labour market.
- This occupation is expected to experience employment growth over most industries, with stronger growth in retail trade than in federal administration.

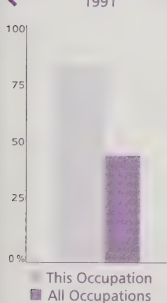
Type of Employment



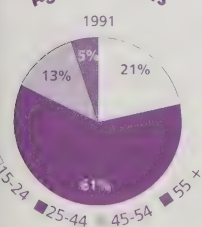
Unemployment Rates



Percentage of Women



Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code:1422. Related Code: 142.  
Vol. 2 Field of Study Cross-index: U11, U81, C71, C110, T12.  
For further information, see List of Associations.



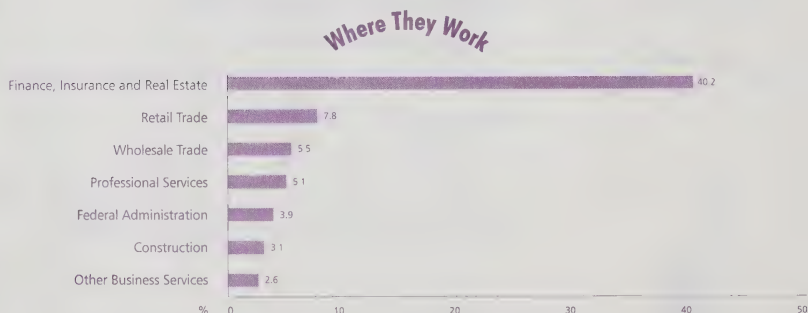


# Finance and Insurance Clerks

## At Work

These clerks work in government and throughout the private sector in payroll administration companies, banks, trust companies, credit unions and collection agencies.

- Accounting clerks calculate, prepare and process bills, invoices and other routine financial records.
- Payroll clerks collect, verify and process payroll data, including the calculation of deductions such as taxes, union dues, insurance and pension plans for employees. They also provide information on payroll matters to employees.
- Customer service representatives and tellers process customers' financial transactions and provide information on banking services.
- Bank clerks compile records of deposits, withdrawals, cheques and other data, process loans, mortgages, retirement savings and other applications, and perform various clerical activities.
- Insurance clerks process claim transactions, policy changes and premium payments, calculate premiums, pension benefits and annuity payments, and perform other clerical activities.
- Other financial clerks perform financial clerical duties in real estate, securities and similar offices.
- Collectors collect payments on overdue accounts and bad cheques, locate debtors and make collection arrangements.



## Education, Training and Experience

These clerks usually must have a high school diploma.

- Payroll clerks usually have college or other courses in accounting, bookkeeping or payroll administration or experience as financial clerks.
- Bank, insurance and other financial clerks are usually provided with on-the-job training.
- Collectors usually need collections licences.

**Full-Time Earnings**

1993

\$38,300

\$24,300

\$16,400

**Highest, Average and Lowest\***

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$24,900 is the average for all occupations.

## About these Occupations

367,000 workers were employed in this group as of 1994 — an 11% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- Over half are accounting clerks and a fifth are tellers.
- 29% work part-time in this group, almost twice the average for all occupations.
- Self-employment is nearly three times lower than the average for all occupations.
- Women make up 79% of workers in this group, far higher than the average of all occupations.
- There are more young workers than in other occupations, indicating these are often low-skill, entry-level positions.
- The unemployment rate is lower than the average for all occupations.
- Full-time earnings are three quarters of the average for all occupations, the lowest of any clerical occupation.
- Employment fluctuates with business conditions but is not seasonal.

**Current labour market conditions in these occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for these occupations will remain fairly good through the year 2000.

- Major improvements in technology will reduce the need for employees, favouring those who upgrade their skills. This may slant the outlook in favour of recent graduates versus older workers and favour workers with good computer skills.
- The finance, insurance and real estate industries are expected to continue to dominate employment for this group, creating over half of all new jobs over the next five years. Relatively strong employment growth is also expected from professional business services.

## Work Prospects

1995 to 2000

Getting  
Better

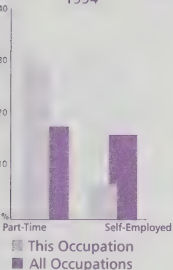
Stable

Getting  
Worse

How will  
labour market  
conditions  
change  
in this  
group?

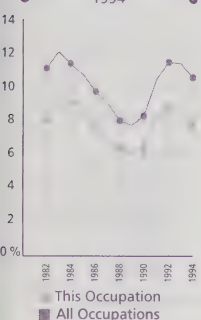
### Type of Employment

1994



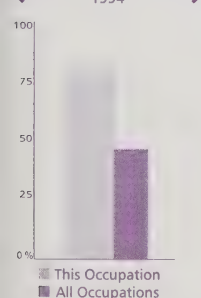
### Unemployment Rates

1994



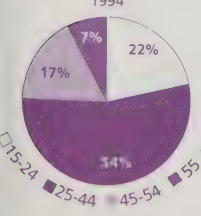
### Percentage of Women

1994



### Age of Workers

1994



**See also:** This Occupation Code: 143. Related Codes: 1431, 1433.  
Vol. 2 Field of Study Cross-index: U11, U81, C11, C12, C14.  
**For further information, see List of Associations.**



# Accounting and Related Clerks

## At Work

These clerks are employed throughout the private sector and in government. Their duties may require them to:

- Calculate, prepare and issue bills, invoices and other financial statements using manual and computerized systems;
- Process, verify and balance financial records and business transactions and enter data in a ledger or computerized system;
- Compile budget data and documents based on estimated revenues and expenses and previous budgets;
- Calculate costs of materials, overhead and other expenses based on estimates, quotations and price lists; and
- Perform other duties such as filing, completing reports and answering clients' questions.

This occupational group includes a variety of clerks such as accounts payable and receivable clerks, audit clerks, billing clerks, ledger clerks, tax clerks and tax return preparers.

## Full-Time Earnings

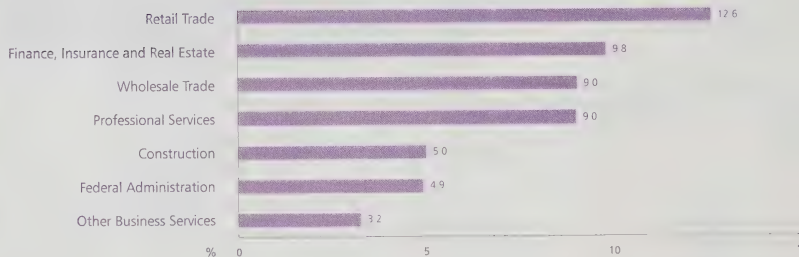
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These clerks usually must have a high school diploma.

- They may be required to complete a college or other course in accounting, bookkeeping or computer operations.
- With additional training and experience, they may advance to supervisory positions or positions requiring more skills such as bookkeeper.

## About this Occupation

199,000 workers were employed in this group as of 1994 — 3% fewer than in 1991. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 15% work part-time, about the average of all occupations.
- Four out of five workers in this occupation are women.
- The age distribution of workers is similar to the overall work force.
- The unemployment rate is below the national average.
- Full-time earnings are well below the average of other occupations and among the lowest for clerical occupations.
- Employment in this occupation fluctuates with business conditions but is not seasonal.

**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation will remain fairly good through the year 2000.

- Major improvements in technology may reduce the need for employees. This market favours those who upgrade their skills, and may slant the outlook in favour of recent graduates. Good computer skills will be more and more essential.
- Although employment opportunities are spread over a variety of industries, professional business services are expected to supply most of the job growth for this group over the next five years and to surpass retail trade as this group's largest employer.

## Work Prospects

1995 to 2000

Getting  
Better

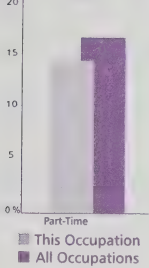
Stable

Getting  
Worse

How will  
labour market  
conditions  
change  
in this  
group?

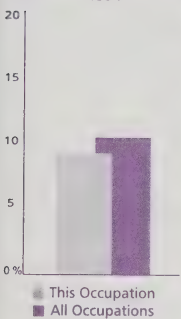
### Type of Employment

1991



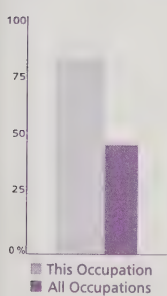
### Unemployment Rates

1994



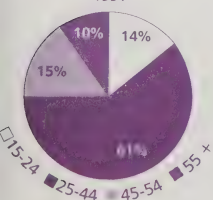
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 1431. Related Code: 143.  
Vol. 2 Field of Study Cross-index: U11, C11, C12, C14, T12.  
For further information, see List of Associations.





# Tellers, Financial Services

## At Work

People in this group work in banks, trust companies, credit unions and other financial institutions. Their duties may require them to:

- Process customers' financial transactions such as deposits, withdrawals, certified cheques, transfers and credit card payments;
- Provide customer services such as opening accounts and savings plans, purchasing bonds and initiating basic investments;
- Sell travellers' cheques, foreign currency and money orders;
- Balance daily transactions using computer programs, calculators and adding machines;
- Sort and file deposit slips and cheques;
- Prepare customer statements and other correspondence for mailing; and
- Answer customers' questions and resolve problems concerning accounts.

## Full-Time Earnings

1993

\$37,000

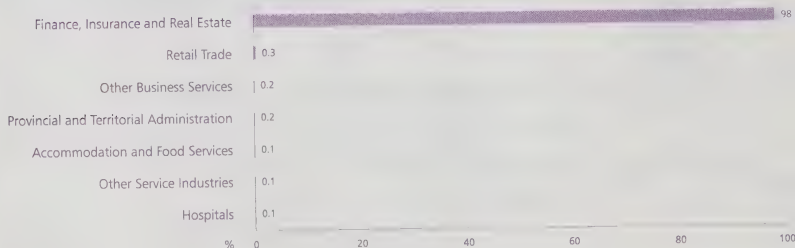
\$27,700

\$14,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group must have a high school diploma.

- Their employers provide on-the-job training.
- With experience, they may advance to supervisory positions.

## About this Occupation

82,000 workers were employed in this group as of 1994 — 11% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- 30% work part-time, almost double the average of all occupations.
- 90% are women, double the average of all occupations.
- There are many young workers, indicating this is often a low-skill entry-level position.
- The unemployment rate is about half that of all occupations.
- Full-time earnings are well below the average of all occupations and are among the lowest for clerical occupations.
- Employment in this occupation is sensitive to business conditions but is not seasonal.

**Current labour market conditions for this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation will remain fairly good through the year 2000.

- Major improvements in technology will reduce the number of people needed to provide these services. Automated tellers, Touch-Tone™ telephone banking and banking through computer networks will replace many people. Jobs will remain for those with the skills to handle transactions that are too complex to be automated.
- Employment is concentrated in the finance, insurance and real estate industries which are expected to experience slow growth in demand for workers in this occupation over the next five years.

## Work Prospects

1995 to 2000

Getting Better

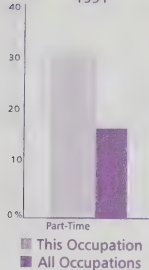
Stable

Getting Worse

How will labour market conditions change in this group?

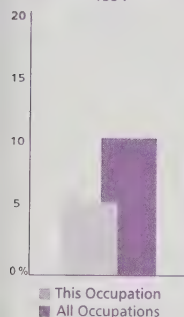
### Type of Employment

1991



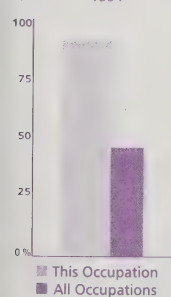
### Unemployment Rates

1994



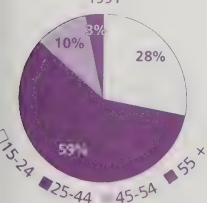
### Percentage of Women

1991



### Age of Workers

1991



**See also:** This Occupation Code: 1433. Related Code: 143.  
Vol. 2 Field of Study Cross-index: U11, U81, U89, C12, C14.  
For further information, see List of Associations.



# Administrative Support Clerks

## At Work

These clerks work throughout the private sector and in government, including courts.

- Administrative clerks compile, verify, record, authorize and issue licences, permits, applications, contracts and requisitions using manual and computerized processing systems. They prepare reports, maintain inventories and perform related clerical duties.
- Personnel clerks assist personnel officers and human resource specialists. They compile, maintain and process information relating to staffing, recruitment, training, labour relations, performance evaluations, classifications and related clerical activities.
- Court clerks prepare court dockets and exhibits and perform other support functions in courtrooms. They also update and maintain court office indexes and files on court actions and decisions.

## Full-Time Earnings

1993

\$47,700

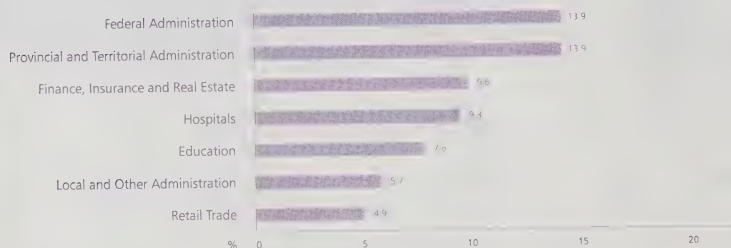
\$33,700

\$20,600

Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Clerks in this group require different educational levels, depending on their occupation.

- Administrative and personnel clerks usually must complete high school and college or other courses in business or personnel administration. They may need some clerical experience and be able to type or operate computers.
- Court clerks must have a high school diploma and are provided with on-the-job training.

## About these Occupations

66,000 workers were employed in this occupational group in 1994. Employment levels increased by 29% over the period 1984-94, while economy-wide employment rose by 17%. Recent employment trends in these occupations are favourable.

- Administrative clerks make up 78% of this group.
- The percentage of part-time workers in this group is slightly below the average of all occupations.
- Self-employment is half the average of all occupations.
- Women are 65% of workers in this occupation — significantly higher than average.
- There are somewhat fewer young workers than the work force average.
- The unemployment rate is lower than the average of all occupations.
- Full-time earnings are approximately equal to the average of all occupations.
- Employment varies moderately with business conditions and is not seasonal.

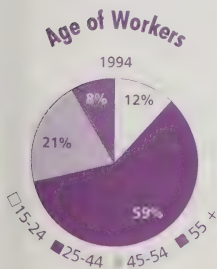
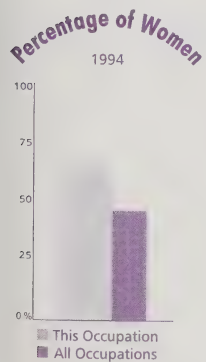
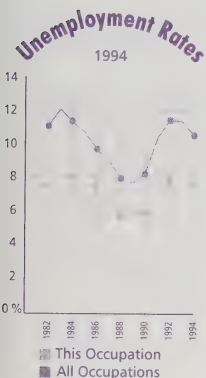
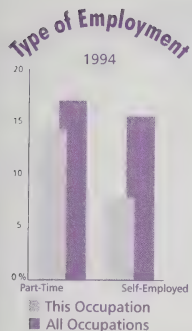
**Current labour market conditions in these occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions are expected to worsen in these occupations through the year 2000 but remain fairly good.

- This area of clerical work will be less affected by technological change than other occupations, as people in this area interact more with other people. However, it will still be important to maintain up-to-date skills.
- Although employment in federal administration is expected to decline and not to grow in provincial administration, overall job growth should occur with expansion in a variety of industries such as finance, professional business services and hospitals.

See also: This Occupation Code: 144.  
Vol. 2 Field of Study Cross-index: U11, U81, C14, T16.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Library, Correspondence and Related Information Clerks

## At Work

These clerks work in governments, and in the private sector including libraries, newspaper and other publishing firms, retail organizations, insurance, telephone and utility companies, market research and polling firms.

- Library clerks issue, receive, sort and shelf library books and assist with other clerical activities.
- Advertising and correspondence clerks, editorial assistants, publication clerks and proofreaders perform specific clerical duties for newspapers, publishing firms and other organizations.
- Customer service clerks respond to customers' questions and complaints, receive payments and perform related clerical activities for retail, insurance and other organizations.
- Information clerks provide information on services, schedules, rates and other matters in response to telephone and in-person questions.
- Survey interviewers contact individuals to collect data for market research, public opinion polls and other purposes.
- Statistical clerks code and compile interview and other data, and conduct routine analyses of data.

## Full-Time Earnings

1993

\$44,700

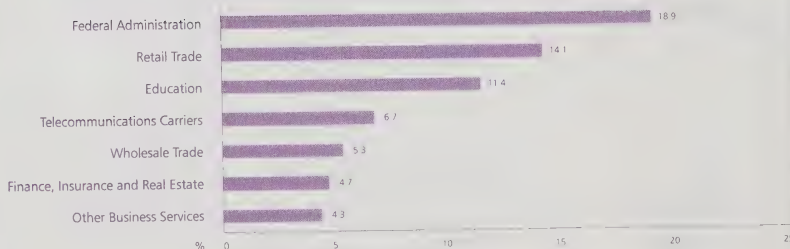
\$29,600

\$16,100

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Clerks in this group require different educational levels, depending on their occupation.

- Library clerks usually must complete high school.
- Advertising and correspondence clerks, editorial assistants, publication clerks and proofreaders must have a high school diploma. They may need to have additional courses in writing, journalism or a related field and previous clerical or administrative experience.
- Customer service and information clerks usually must complete high school and have some clerical or sales experience.

## About these Occupations

98,000 workers were employed in this group as of 1994. Employment in this occupational group grew by 17% over the 1984-94 period, the same rate as for total employment. Recent employment trends in this group are favourable.

- Information clerks make up 60% of workers in this occupational group.
- The percentage of part-time workers in this group is somewhat higher than the average of all occupations.
- Self-employment is about half the average of all occupations.
- Two thirds of workers in this group are women — significantly more than the average of all occupations.
- The age distribution of workers is similar to the average of all occupations.
- The unemployment rate is somewhat lower than the average of all occupations.
- Full-time earnings are below the average of all occupations.
- Employment is moderately sensitive to fluctuations in business conditions but is not seasonal.

**Current labour market conditions for this occupational group are fairly good despite weakness remaining from the 1991-92 recession.**

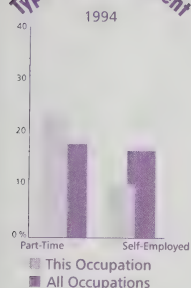
## Looking to the Year 2000

Labour market conditions in this group should remain fairly good though the year 2000.

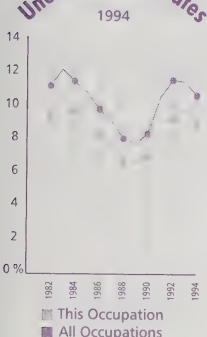
- Improvement in information technology will reduce the demand for unskilled labour in this group. New entrants should expect to retrain constantly to remain current in this field.
- Federal administration, telecommunications and education are all expected to reduce employment requirements for workers from this group over the next five years. However, growth in employment is expected to be strong in a wide variety of other industries such as finance and professional business and other services.

See also: This Occupation Code: 145.  
Vol. 2 Field of Study Cross-index: U11, U43, C14, T16.  
For further information, see List of Associations.

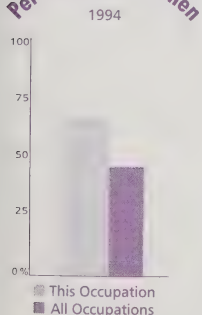
### Type of Employment



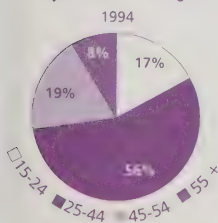
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Mail and Message Distribution Occupations

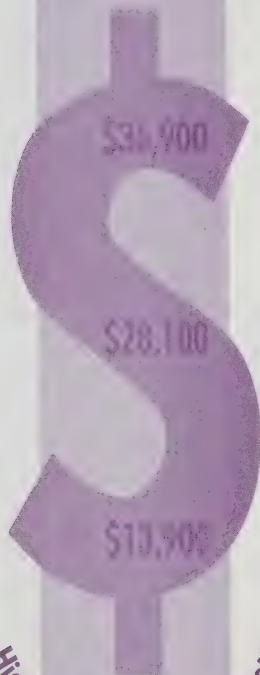
## At Work

People in this group work for Canada Post Corporation and other government departments, courier and parcel express services and other private sector organizations.

- Postal clerks calculate postage for letters, parcels and registered mail and receive payment at sales counters and postal wickets. They also sell stamps, prepaid mail and money orders, route mail and perform other related clerical activities.
- Mail sorters and mail room clerks sort, label, bag and route mail in mail processing plants and internal mail rooms.
- Letter carriers sort and deliver mail, record delivery of registered mail and collect payments of cash-on-delivery parcels for Canada Post Corporation.
- Couriers and messengers pick up and deliver letters, parcels and other items, travelling on foot, by bicycle or motor vehicle.
- Flyer and newspaper distributors deliver these items to residences and businesses.

## Full-Time Earnings

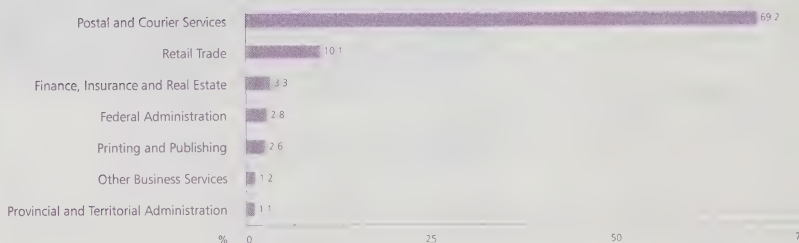
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in these occupations require some high school education.

- Mail and postal clerks and mail sorters may, with experience and additional training, progress to supervisory positions.
- Letter carriers receive between two weeks and one month of training at Canada Post Corporation. With experience and additional training, they may progress to supervisory positions.
- Couriers, messengers and newspaper distributors need to have a drivers licence and be eligible for bonding.

## About these Occupations

94,000 workers were employed in this group in 1994 — an 11% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are unfavourable.

- 40% work as mail clerks and a third as couriers and messengers.
- The percentage of part-time workers is higher than the average of all occupations.
- Self-employment is about half the average of all occupations.
- A higher percentage of women is employed in this group compared to the average of all occupations.
- Age distribution is similar to the overall work force.
- The unemployment rate is about average, while many other clerical occupations have unemployment rates well below average.
- Full-time earnings are 80% of the average of all occupations and are among the lowest for clerical occupations.
- Employment in this group varies moderately with business conditions and is not seasonal.

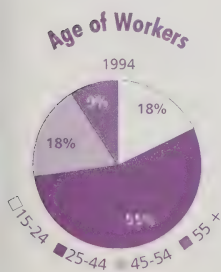
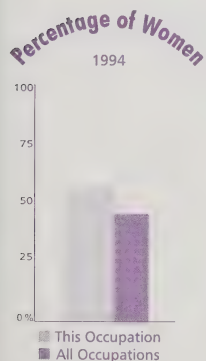
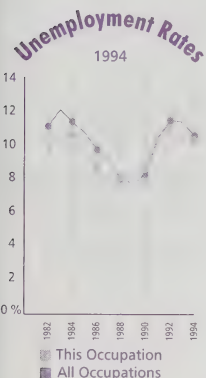
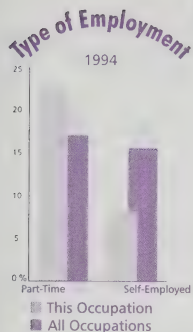
**Current labour market conditions in these occupations are fairly good.**

## Looking to the Year 2000

Labour market conditions in these occupations will remain fairly good through the year 2000.

- Changes in the way people communicate has created a downward trend in the use of postal and courier services. The only positive sign is that greater use of electronic store fronts may increase the use of parcel post.
- Privatization has changed the way the mail is processed. More and more sorting is done by multiskilled individuals instead of by workers dedicated exclusively to the task.
- In spite of the downward trend in employment demand from some industries, business and professional services and retail trade are expected to provide increased job opportunities for workers in this group.

See also: This Occupation Code: 146.  
Vol. 2 Field of Study Cross-index: U11, U86, C14, T110.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Recording, Scheduling and Distributing Occupations

## Full-Time Earnings

1993

\$45,100

\$34,900

\$15,500

## Highest, Average and Lowest\*

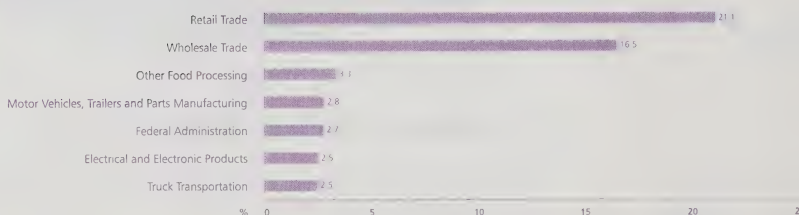
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work in government and throughout the private sector.

- Shippers and receivers ship and receive goods, maintain records and oversee the loading and unloading of goods.
- Storekeepers and parts clerks store and issue parts and supplies for sale and use within their organizations.
- Production clerks prepare work schedules, and co-ordinate and monitor the movement of materials and the progress of production.
- Purchasing clerks buy materials for organizations.
- Inventory clerks maintain computerized or manual records of materials.
- Dispatchers operate radio and telecommunication equipment to dispatch emergency vehicles, drivers and personnel.
- Radio operators communicate with personnel on ships, aircraft, offshore oil rigs and other remote locations. They also operate Canadian Forces communications equipment.
- Transportation route and crew schedulers prepare route schedules and assign personnel for transit systems and other transportation.

## Where They Work



## Education, Training and Experience

People in these occupations usually have a high school diploma and may require some specialized training after high school and work experience.

- Automotive parts clerks may need a three- or four-year apprenticeship in Manitoba, Alberta, the Northwest Territories, British Columbia and Yukon.
- Inventory clerks may be required to be able to operate computerized inventory systems.
- Police and emergency dispatchers usually need on-the-job training, and those who operate radios usually require a provincial radio operator's certificate.

## About these Occupations

188,000 workers were employed in this group as of 1994 — 8% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are unfavourable.

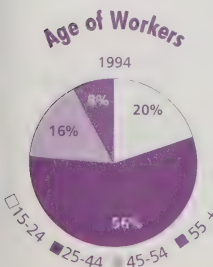
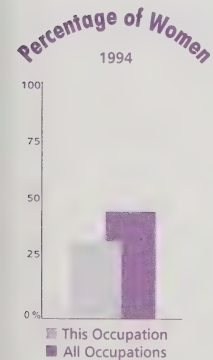
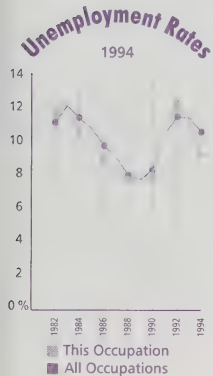
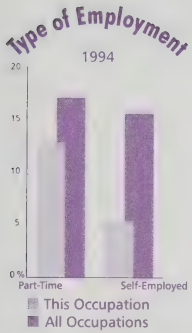
- Over 40% of these workers are shippers and receivers.
- The percentage of part-time workers is lower than the average of all occupations.
- Self-employment is about one third the average of all occupations.
- The percentage of women is below the average of all occupations.
- A higher than average proportion of workers is between the ages of 15 and 24, as many jobs are at entry level with low educational requirements.
- The unemployment rate is approximately average.
- Full-time earnings are below the average of all occupations but among the highest for clerical occupations.
- Employment fluctuates with business conditions but is not seasonal.

**Current labour market conditions in these occupations are fairly good.**

## Looking to the Year 2000

Labour market conditions in these occupations will improve from fairly good to good over the next five years.

- Within these occupations, there are many specialties, giving ample opportunity for new challenges for those willing to undertake training to move ahead. This means levels of education and training for new entrants are likely to be higher than for those currently in these occupations.
- Retail and wholesale trade will provide most of the new job opportunities for this group. Employment related to the motor vehicle, trailers and parts industry will also see growth, as will employment related to food services.



See also: This Occupation Code: 147.  
Vol. 2 Field of Study Cross-index: U11, U45, U49.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Managers in Engineering, Architecture, Science and Information Systems

## Full-Time Earnings

1993

\$82,600

\$43,400

\$22,400

## Highest, Average and Lowest\*

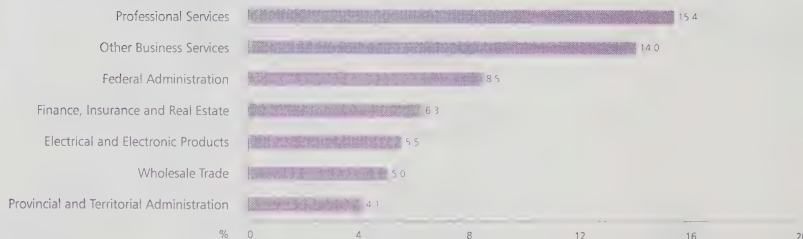
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

These managers work in engineering consulting and scientific research companies, architectural firms, government and a wide range of private sector organizations.

- Engineering managers plan and direct the operations of engineering departments, services and firms engaged in consulting, research and other engineering activities.
- Architecture managers, including directors, vice-presidents, principals-in-charge and project architects, plan and direct the operations of organizations specializing in residential, commercial, industrial or institutional architecture or in all types.
- Landscape architecture managers plan and direct the operations of landscape architecture organizations.
- Science managers plan and direct the operations of research and development laboratories, quality control departments and other scientific organizations.
- Information systems and data processing managers plan and direct the operations of information systems and data processing organizations.

## Where They Work



## Education, Training and Experience

In general, these managers require a university degree in their occupational area and several years' experience including supervisory experience.

- Engineering managers need a bachelor's degree or a college diploma in engineering and must usually be registered as a Professional Engineer (P.Eng./ing.) or certified as a technologist (CET) by their provincial or territorial professional association.
- Architecture managers must usually be licensed as a professional in their field. Registration requires a minimum of three years of experience.
- Science managers need a master's or doctoral degree in a scientific discipline.
- Information systems and data processing managers usually have a bachelor's or master's degree in computer science, business administration, commerce or engineering.

## About these Occupations

49,000 workers were employed in this group in 1994. Employment in this occupational group grew by 39% over the 1984-94 period, while economy-wide employment rose by 17%. Recent employment trends in these occupations are highly favourable.

- These managers were almost evenly distributed between those in information systems and those in engineering, architecture and science fields.
- 95% of workers are employed full-time, reflecting that working conditions for managers require them to keep a standard work week.
- The proportion of self-employed workers is somewhat below the average of all occupations.
- Since 1984, the percentage of women has increased steadily and is now about three quarters of the national average.
- There are few young people in these occupations, reflecting the work experience required for managerial positions.
- The unemployment rate is about half the national average.
- Full-time earnings are much higher than the national average as a result of the education and experience, and the responsibilities given to managers.
- Employment in this occupational group is moderately affected by business conditions and is not seasonal.

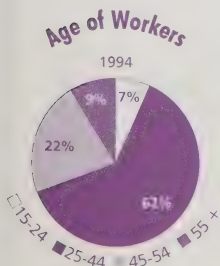
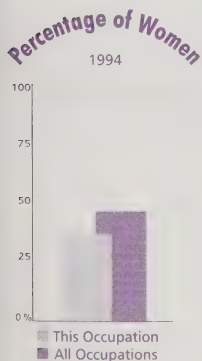
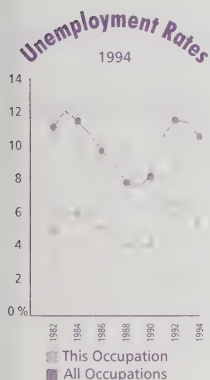
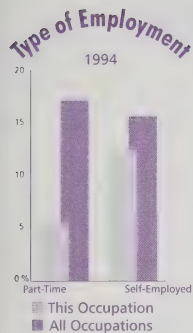
**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this group are expected to remain good through the year 2000.

- Many managers in information systems and data processing will need skill upgrading and a master's degree for promotion to more senior positions. Those who design and implement networking systems are most successful in the labour market.
- Strong employment growth for this group is expected across almost all industries led by professional and other business services and electronic products.

**See also:** This Occupation Code: 021.  
Vol. 2 Field of Study Cross-index: M11, U11, U35, U73, C71.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Physical Science Professionals

## At Work

These professionals work in government, universities, manufacturing and telecommunication companies, utilities, laboratories, hospitals, chemical, petrochemical, pharmaceutical and pulp and paper industries, petroleum and mining companies, and consulting and other organizations. They may specialize within their fields.

- Physicists conduct basic research of natural phenomena and develop new processes and devices in areas such as electronics, aerodynamics, communications, power utilities, optics and lasers.
- Astronomers research the universe and develop instrumentation and software for astronomical observation and analysis.
- Chemists conduct research and are involved in process control, product development, industrial operations, environmental control, biotechnology and other areas.
- Geologists, geochemists and geophysicists conduct research and exploration to extend knowledge of the earth's surface and sub-surface, locate mineral, hydrocarbon and water resources, plan and implement extraction programs, and conduct environmental assessments.
- Meteorologists forecast weather, conduct research into weather, climate and atmosphere and provide consultation on atmospheric phenomena.
- Metallurgists study the properties and production of metals and alloys; materials scientists research ceramics, composite and other materials; and soil scientists research the composition and evolution of soils.

## Full-Time Earnings

1993

\$65,000

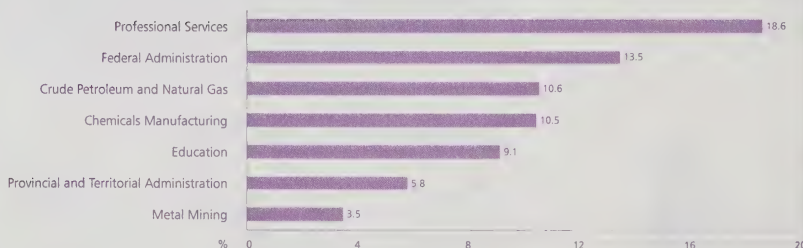
\$43,000

\$72,000

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Most of these professionals require a bachelor's degree in their science or a related discipline. Those conducting research or teaching in a postsecondary establishment usually require a master's or doctoral degree.

- Physicists and astronomers require a master's or doctoral degree.
- Chemists working in Quebec must be members of L'Ordre des chimistes du Québec.
- Geologists and geophysicists may require registration by a provincial or territorial association.

## About these Occupations

23,000 workers were employed in this group as of 1994 — a 22% increase from 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in these occupations are favourable.

- 45% of these workers are chemists and 36% are geologists.
- 94% work full-time.
- Self-employment is half the average of all occupations but has been increasing more rapidly than in other occupations since 1984.
- The percentage of women in this type of occupation is roughly half the average of all occupations.
- There are few young workers due to the high level of education required.
- The unemployment rate is about half the national average.
- Full-time earnings are well above the average of all occupations but somewhat below those of engineers.
- Employment fluctuates moderately with business conditions but is not seasonal.

**The current labour market conditions in these occupations are good.**

## Looking to the Year 2000

Labour market conditions in these occupations will improve from good to very good over the next five years.

- The employment of these professionals is closely related to investment in research and development. Some specialties, such as health, require constant upgrading of skills. There is a recent tendency to work with other specialists, particularly engineers and physicians.
- Professional services (consulting) will continue to be the centre for job growth over the next five years, creating almost half of the new jobs. Significant, but smaller, contributions to job growth are expected to come from the chemical industry and education.

## Work Prospects

1995 to 2000

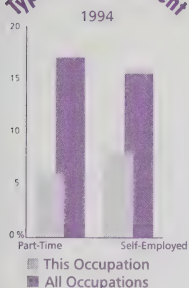
Getting  
Better

Stable

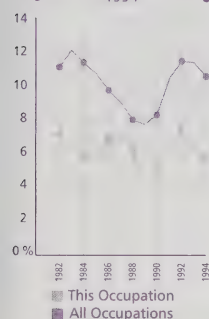
Getting  
Worse

How will  
labour market  
conditions  
change  
in this  
group?

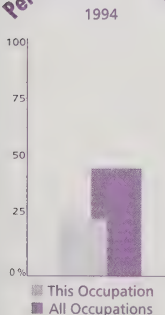
### Type of Employment



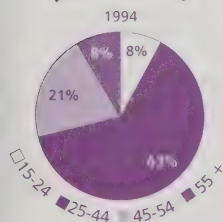
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 211.  
Vol. 2 Field of Study Cross-index: M71, U71, U64, U72, C34.  
For further information, see List of Associations.



# Life Science Professionals

## At Work

Professionals in the life sciences work in biotechnology, chemical, pharmaceutical, health care, resource, environmental and consulting companies, in government, in educational institutions including universities and research institutes, and in the forestry and agricultural sectors.

- Biologists conduct studies of the structure and characteristics of humans, plants and animals. They conduct environmental assessment studies, classify plant and animal specimens and carry out basic and applied research.
- Microbiologists and cell and molecular biologists research such areas as bacteria, fungi, viruses, tissues, cells, pharmaceuticals and plant and animal toxins.
- Forestry professionals research, plan, administer and direct forestry management and harvesting programs. They conduct forestry education and extension programs and act as consultants on forestry issues.
- Agricultural representatives, consultants and specialists provide information and advice regarding nutrition to companies, government and the public.

This occupational group also includes consultants and specialists such as geneticists, food and nutrition scientists and toxicologists.

## Full-Time Earnings

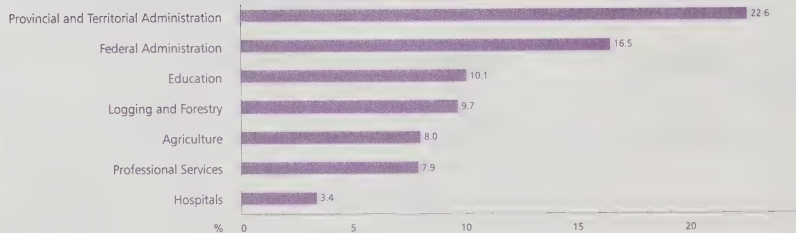
1993



Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group require a university degree in biology or related discipline.

- Research scientists in biology or a related field require a master's or doctoral degree to work in the government or private sector. They must have postdoctoral research experience for employment in academic or research institutions.
- Forestry professionals require a forestry or forest engineering degree. Registration as a forester or forest engineer, which requires two years of supervised work and examinations, is required in provinces with forestry associations.
- Agricultural professionals require a bachelor's or master's degree and usually require agrologist (P.Ag.) membership or membership eligibility. In Quebec, they must be members of L'Ordre des agronomes du Québec.

## About these Occupations

15,000 workers were employed in this group as of 1994 — a 12% increase in employment from 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in these occupations are favourable.

- Half of these workers are biologists.
- The percentage of part-time workers is almost three times less than the average of all occupations.
- Self-employment is about half the average of all occupations.
- The percentage of women in this type of occupation is well below average, with moderate increases over the last 10 years.
- There are relatively few young workers, due to the high level of educational requirements.
- The unemployment rate is well below average.
- Full-time earnings are above the average of all occupations but are among the lowest for scientific professional occupations.
- Employment in this group varies moderately with business conditions and is somewhat affected by seasonal factors.

**Current labour market conditions in these occupations are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for this group will worsen somewhat over the next five years, but remain good.

- Employment in this group may fluctuate according to government spending decisions.
- Increasing public pressure for products safe for humans and produced without harming the environment will increase the demand for life science professionals.
- Changing technologies and understanding of biological systems will necessitate frequent upgrading of skills and expertise.
- With less employment in federal and provincial administration, most job opportunities for this group are expected to be in professional services, agriculture and education.

See also: This Occupation Code: 212.  
Vol. 2 Field of Study Cross-index: U64, U66, C62, C63.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

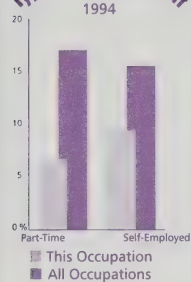
Getting Better

Stable

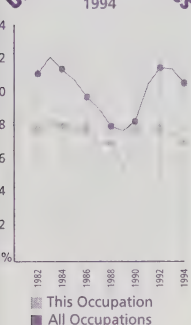
Getting Worse

How will labour market conditions change in this group?

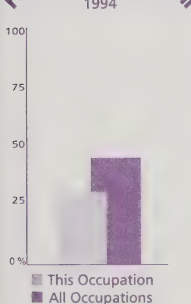
### Type of Employment



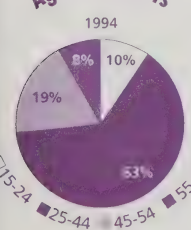
### Unemployment Rates



### Percentage of Women



### Age of Workers







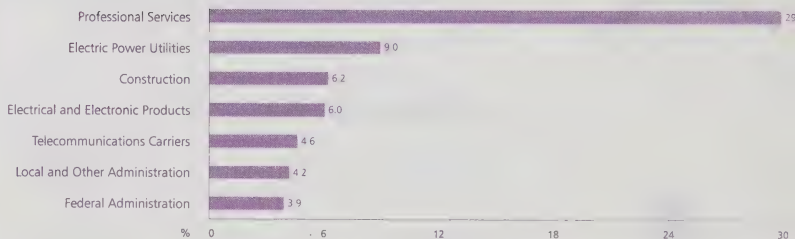
# Civil, Mechanical, Electrical and Chemical Engineers

## At Work

These engineers work in government, engineering consulting firms, electrical utilities, research and educational institutions, communications companies, and manufacturing, processing, transportation and many other industries.

- Civil engineers plan, design, evaluate, research and manage projects for the construction and repair of structures such as buildings, roads, airports, rapid transit facilities, bridges, dams, ports and coastal installations, and systems related to highway and transportation services, water distribution and sanitation.
- Mechanical engineers plan, design, evaluate, research and manage projects related to the operation of machinery and systems for heating, ventilation and air conditioning, power generation, transportation, processing and manufacturing.
- Electrical and electronics engineers plan, design, evaluate, research and manage projects related to electrical generation and distribution networks, electrical machinery and components, and electronic communications, instrumentation and control systems, equipment and components.
- Chemical engineers plan, design, evaluate, research and manage projects related to chemical processes and equipment, oversee the operation and maintenance of processing plants, and perform activities related to quality control, environmental protection, biochemical and biotechnical engineering and other areas.

## Where They Work



## Education, Training and Experience

Engineers in this group require a university degree in the discipline of engineering they represent or in a related discipline.

- To practise engineering, they usually require registration as a Professional Engineer (P.Eng./ing. in Quebec) by a provincial or territorial association of professional engineers.
- In Quebec, they must be members of L'Ordre des ingénieurs du Québec.

## Full-Time Earnings

1993

\$67,500

\$47,500

\$28,700

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

94,000 workers were employed in this group as of 1994 — a 28% increase from 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are highly favourable.

- More than a third of these engineers are civil engineers, and almost a quarter are mechanical engineers.
- 95% work full-time.
- Self-employment is presently consistent with the average of all occupations.
- The percentage of women in this type of occupation is one third the average but has increased significantly over the last 10 years.
- There are few young workers due to the high level of educational requirements for these occupations.
- The unemployment rate is well below the national average.
- Full-time earnings are well above the average of other occupations and are the highest of any scientific professional occupational group.
- Employment in this group fluctuates moderately with business conditions but is not seasonal.

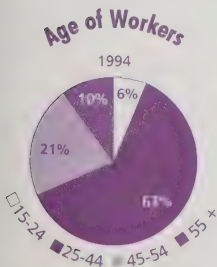
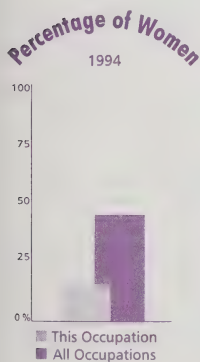
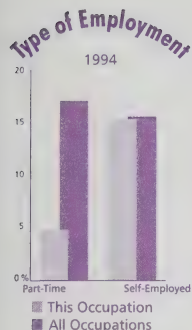
**Current labour market conditions in these occupations are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations will remain good through the year 2000.

- Employment in these occupations was affected by the recent downturn and economic restructuring. However, the labour market in these occupations is highly adaptable.
- Successful individuals in this area are those willing to keep pace with the rapid changes in technology that will occur over their working life. Some techniques learned during their school years may become obsolete long before their careers are over.
- These occupations are also a point of entry for many others. Senior managers and sales people often start their careers in this area.
- Professional services should continue to be the engine of growth for jobs in this group, creating more than half of all new jobs. Smaller contributions to job growth will come from electric power utilities, from construction, and from the electrical and electronic product industry.

**See also:** This Occupation Code: 213. Related Codes: 2131, 2132, 2133. Vol. 2 Field of Study Cross-index: U34, U35, U36, U37. For further information, see List of Associations.



## Work Prospects 1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Civil Engineers

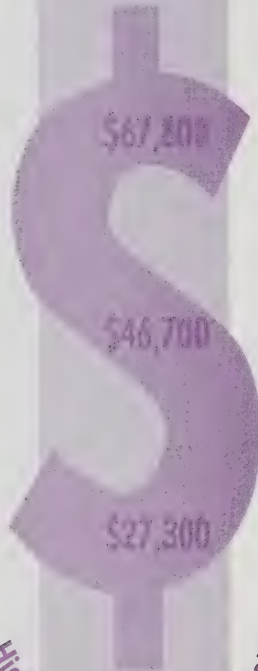
## At Work

Civil engineers work for engineering consulting companies, municipal and other levels of government, and many other industries. They may also be self-employed.

- They plan, design, develop and manage a variety of major civil projects including the construction and repair of buildings, roads, airports, railways, bridges, dams, ports and water distribution and sanitation systems.
- They may specialize in foundation analysis, building and structural inspection, surveying and municipal planning.
- They often work with professionals from other fields, gaining knowledge and skills that allow them to practise in associated areas of science, engineering, sales, marketing and management.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Civil engineers require a bachelor's degree in civil engineering or in a related field of engineering.

- They are required to register as Professional Engineers (P.Eng./ing. in Quebec) by a provincial or territorial association of professional engineers to get employment and practise in their field.
- For those *with* a degree from an accredited educational program, eligibility for registration as a P.Eng./ing. includes at least two years' supervised experience and passing a professional practice examination.
- For those *without* a degree from an accredited educational program, eligibility for registration as a P.Eng./ing. requires a term of supervised employment and successfully passing of examinations.
- With experience, they can progress to supervisory and senior positions.

## About this Occupation

33,000 workers were employed in this occupation as of 1994 — 33% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 97% work full-time.
- Women make up 6% of all workers in this occupation.
- There are very few young workers due to the high level of educational requirements for this occupation.
- The unemployment rate is well below average.
- Full-time earnings are well above the average of all occupations.
- Employment changes only moderately with business conditions and is little affected by seasonal fluctuations.

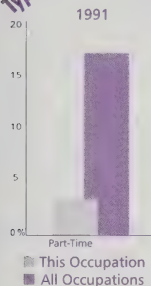
**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

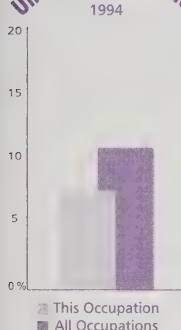
Labour market conditions in this occupation will remain fairly good through the year 2000.

- Restraints on government spending may mean a reduction in new public works projects. Possibilities for new public works include mass transport and sewage treatment. However, much of government spending will be on maintenance of existing infrastructure.
- Strong growth in professional services is expected to be responsible for more than two thirds of the employment growth for this occupation over the next five years. Important but smaller contributions to employment growth are expected to come from construction, local governments and electric power utilities.

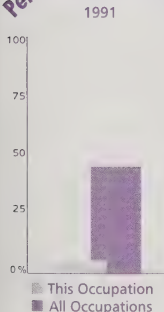
Type of Employment



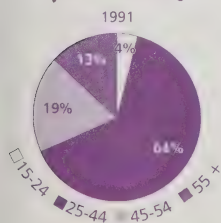
Unemployment Rates



Percentage of Women



Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 2131. Related Code: 213.  
Vol. 2 Field of Study Cross-index: U33, U34, U36, U37, C35.  
For further information, see List of Associations.





# Mechanical Engineers

## At Work

Mechanical engineers work for consulting firms, power generating utilities and a wide range of manufacturing, processing and transportation industries. They may also be self-employed.

- They research, design and develop machinery and systems for heating, ventilating and air conditioning, power generation, transportation, processing and manufacturing.
- They have duties related to the evaluation, installation, operation and maintenance of mechanical systems.
- They often work with professionals from other fields, gaining knowledge and skills that may allow them to practise in associated areas of science, sales, marketing and management.
- They also work closely with civil, electrical, aerospace, chemical, industrial and other engineers, resulting in job mobility between some fields of specialization in these disciplines.

## Full-Time Earnings

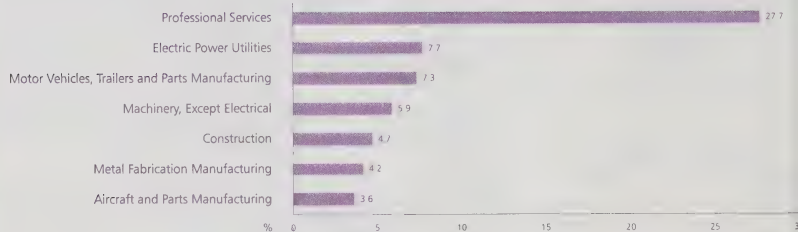
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Mechanical engineers usually require a bachelor's degree in mechanical engineering or in a related field of engineering.

- They are required to register as Professional Engineers (P.Eng./ing.) by a provincial or territorial association of professional engineers to get employment and practise in their field.
- For those *with* a degree from an accredited educational program, eligibility for registration as a P.Eng./ing. includes at least two years' supervised experience and passing a professional practice examination.
- For those *without* a degree from an accredited educational program, eligibility for registration as a P.Eng./ing. requires a term of supervised employment and successfully passing examinations.
- With experience, they can progress to supervisory and senior positions.

## About this Occupation

23,000 workers were employed in this occupation as of 1994 — 29% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 96% work full-time.
- Women make up only 4% of all workers in this occupation.
- There are few young workers due to the high educational requirements in this occupation.
- The unemployment rate is well below the average.
- Full-time earnings are well above average levels.
- Employment fluctuates moderately with business conditions and is not seasonal.

**Current labour market conditions for this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions will remain fairly good in this occupation through the year 2000.

- The ability of Canadian companies to succeed in the world marketplace depends critically on this type of engineering. Modernization of equipment to remain competitive requires the services of these engineers.
- Individuals in this field should be prepared to adapt to dramatic changes in skills that may occur during their working lives. Changes in employment due to corporate restructuring or technological change often occur.
- Professional services and the motor vehicle industry will provide most of the employment growth for this occupation over the next five years. Electric power utilities are expected to make a relatively smaller contribution.

## Work Prospects

1995 to 2000

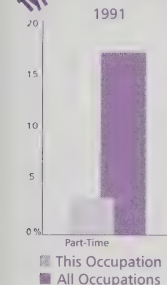
Getting Better

Stable

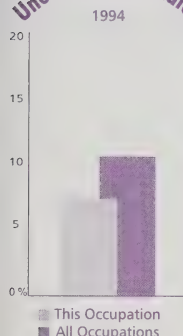
Getting Worse

How will labour market conditions change in this group?

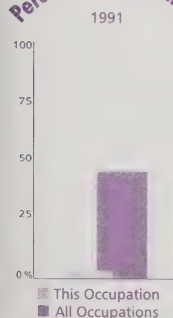
### Type of Employment



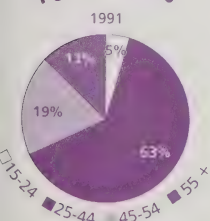
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 2132. Related Code: 213.  
Vol. 2 Field of Study Cross-index: U34, U35, U36, U37, C312.  
For further information, see List of Associations.



# Electrical and Electronics Engineers

## At Work

These engineers work in electrical utilities, communications companies, manufacturers of electrical and electronic equipment, consulting firms, in a wide range of manufacturing, processing and transportation industries and in government.

- They design, plan, research, evaluate and test the operation and performance of electrical and electronic equipment and systems.
- They may specialize in a number of areas including electrical design for residential, commercial or industrial installations, electrical power generation and transmission, communications systems, and instrumentation and control systems.
- They often work with professionals from other fields, gaining knowledge and skills that may allow them to practise in associated areas of science, engineering, sales, marketing or management.

## Full-Time Earnings

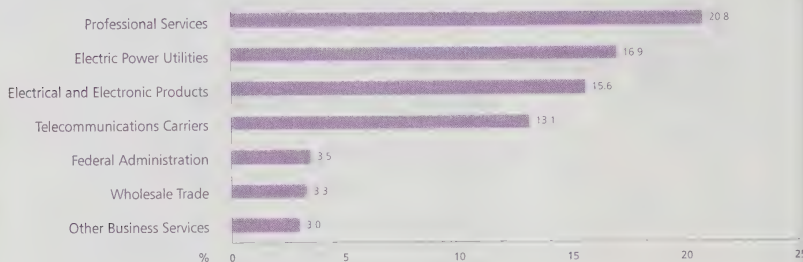
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Electrical and electronics engineers need a bachelor's degree in electrical or electronics engineering or in a related field of engineering. They are often required to register as professional engineers (P.Eng./ing. in Quebec) with a provincial or territorial association to get work and experience in their field.

- For those *with* a degree from an accredited educational program, eligibility for registration as a professional engineer includes at least two years' supervised experience and, in some provinces, passing a professional practise examination.
- For those *without* a degree from an accredited educational program, eligibility for registration as a professional engineer in some provinces requires six-to-eight years of supervised employment and the successful passing of examinations.
- In Quebec, they must be members of L'Ordre des ingénieurs du Québec.
- With experience, they can progress to supervisory and senior positions.

## About this Occupation

31,000 workers were employed in this occupation as of 1994 — 25% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 97% work full-time.
- The percentage of women in this occupation is almost seven times lower than average but has increased more quickly than other occupations over the last 10 years.
- There are few young workers due to the high level of education required for this occupation.
- The unemployment rate is half the average rate.
- Full-time earnings are well above the average.
- Employment fluctuates somewhat with economic conditions but is not seasonal.

**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation will remain good through the year 2000.

- Firms in this area face intense international competition. Only products that are world class will succeed. To be successful, engineers that design these products must be at the leading edge of their field, continuously updating their skills.
- This occupation is also a stepping stone to many other occupations, with people often going on to careers in management and sales.
- Most new job growth is expected to be in professional services, the largest employer for these engineers. Job growth is also expected in electrical and electronic products which will surpass electric power utilities as the second largest employer by the turn of the century.

## Work Prospects

1995 to 2000

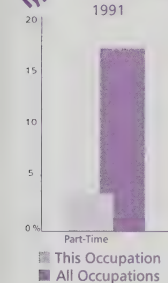
Getting Better

Stable

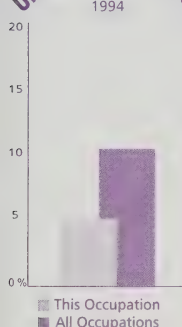
Getting Worse

How will labour market conditions change in this group?

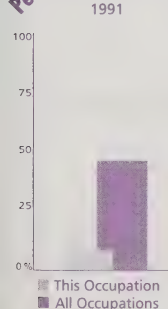
### Type of Employment



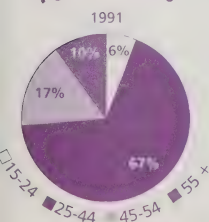
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 2133. Related Code: 213.  
Vol. 2 Field of Study Cross-index: M35, U35, U36, U37, C38.  
For further information, see List of Associations.





# Other Engineers

## At Work

These engineers are employed throughout the public and private sectors.

- Industrial and manufacturing engineers increase the efficiency of industrial production and the use of human resources and equipment.
- Metallurgical and materials engineers design and develop processes and equipment to concentrate, extract, refine and process metals and other materials.
- Mining engineers plan and design the development of mines, mining facilities, equipment and systems, and mining operations.
- Geological engineers analyze geological and geotechnical conditions for civil engineering, mining and other projects.
- Petroleum engineers research, develop and supervise projects associated with the drilling, completion, testing and reworking of oil and gas wells.
- Aerospace engineers research, design and develop aircraft, spacecraft, missiles, aerospace systems and their components.
- Computer engineers design, develop and test computer hardware and software.
- Agricultural engineers design agricultural machinery and systems.
- Engineering physicists and engineering scientists conduct research and develop new processes and equipment to expand basic knowledge in engineering.
- Biomedical engineers design and develop medical instruments and equipment.
- Marine and naval engineers design and develop ships and floating structures.
- Food processing engineers design and develop processes and equipment for handling food.
- Textile engineers design and develop processes and equipment for the production of fibres, yarns and textiles.

## Full-Time Earnings

1993

\$66,100

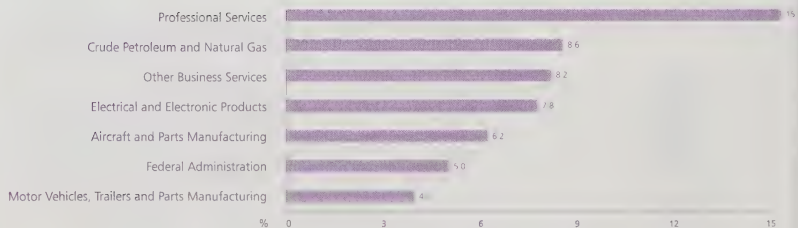
\$15,800

\$27,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These engineers must have a bachelor's degree in their field of engineering.

- They must register as a professional engineer (P.Eng./ing. in Quebec) with a provincial or territorial association of professional engineers.

## About these Occupations

38,000 workers were employed in this group in 1994 — 31% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

- About a quarter of this group are industrial engineers and about a quarter are computer engineers.
- 95% work full-time.
- The proportion of self-employment is close to the average of all occupations.
- The percentage of women in this group is less than half the average of all occupations, but has increased somewhat over the last 10 years.
- There are few young workers due to the high level of educational requirements.
- The unemployment rate is well below the average.
- Full-time earnings are well above average.
- Employment fluctuates moderately with business conditions but is not seasonal.

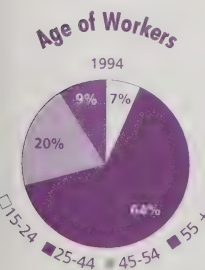
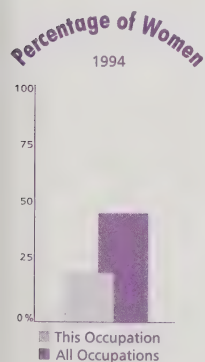
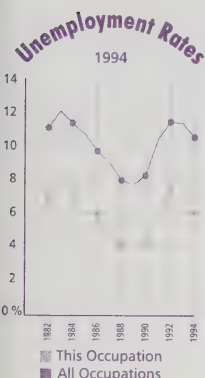
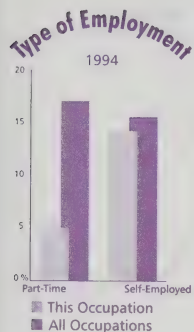
**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations will remain good through the year 2000.

- The highly diversified nature of the occupations in this group means some occupations may have much better or much worse results than the group as a whole.
- Individuals in these occupations should expect technological change to alter the nature of their work many times throughout their working lives. Success will only come to those willing to keep pace with these changes. Opportunities exist to move into other occupations such as management and sales.
- Job growth is expected to be spread over a variety of industries, but professional business services and the electrical and electronic products industry will continue to be the major job generators for this group.

See also: This Occupation Code: 214.  
Vol. 2 Field of Study Cross-index: U34, U35, U36, U37.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Architects, Urban Planners and Land Surveyors

## At Work

People in this group work in government, architectural, engineering and landscape consulting and contracting firms, private corporations, private sector surveying firms and for land developers. They may also be self-employed.

- Architects plan and develop designs for the construction and renovation of residential, commercial, institutional and industrial buildings.
- Landscape architects develop landscape designs and oversee the landscaping of commercial projects, office complexes, parks, golf courses and residences.
- Urban and land planners prepare and recommend land development plans for urban and rural areas and remote regions.
- Land surveyors direct and conduct legal surveys to establish property boundaries, and prepare and maintain associated documents.

## Full-Time Earnings

1993

\$66,100

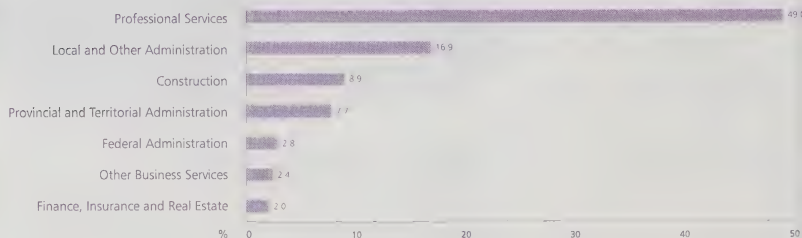
\$44,500

\$21,700

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group generally require a university degree.

- Architects must complete an architecture degree and two years' experience with a registered architect or studies from the Royal Architectural Institute of Canada and eight years' experience with a registered architect. They must register with their provincial association and pass its examinations.
- Landscape architects require some design experience and registration or certification with their provincial association.
- Urban and land use planners usually belong to the Canadian Institute of Planners and, in some provinces, must belong to their provincial association. In Quebec, they must be members in L'Ordre professionnel des urbanistes du Québec.
- Land surveyors must complete a degree in surveying engineering or survey science or pass the official land surveyor examinations. They must also article for one to three years and pass professional land survey examinations for a federal or provincial licence. To practise, they must be members of the provincial professional land surveyor association.

## About these Occupations

23,000 workers were employed in this group as of 1994 — 18% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- Architects, urban planners and surveyors each make up about 30% of workers in this group.
- 94% work full-time.
- The proportion of self-employment is consistent with the average of all occupations and has increased since 1989.
- The percentage of women in this group of occupations is almost three times lower than the average, but it has increased somewhat over the last 10 years.
- There are few young workers due to the high level of education required for this type of occupation.
- The unemployment rate is well below the average.
- Full-time earnings are well above the average.
- Employment fluctuates somewhat with business conditions and is seasonal.

**Current labour market conditions in this group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupational group are expected to remain fairly good through the year 2000.

- This group has just been through a period of adjustment as the construction of large projects has fallen off, although some of this was due to the recession. There should be a return to more normal conditions, but it may be only partial as government and corporate downsizing and increased self-employment are expected to reduce the demand for large projects permanently.
- Most in this group are employed in professional business services, and most new job opportunities are expected to be in that area over the next five years. The construction industry is also expected to be a source of new jobs. Less employment is expected in local administration.

## Work Prospects

1995 to 2000

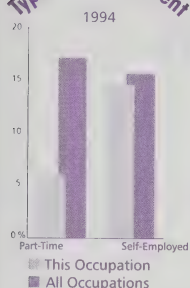
Getting Better

Stable

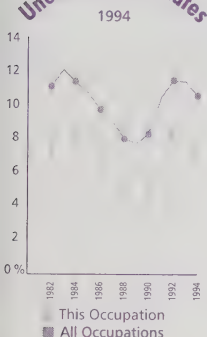
Getting Worse

How will labour market conditions change in this group?

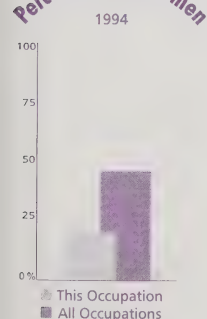
### Type of Employment



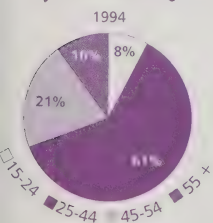
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 215.  
Vol. 2 Field of Study Cross-index: U32, U34, U35, U36, U37.  
For further information, see List of Associations.





# Mathematicians, Systems Analysts and Computer Programmers

## At Work

People in this group work in government, universities, bank, trust and insurance companies, science, engineering and computer consulting firms, and throughout the private sector.

- Mathematicians and statisticians develop and apply mathematical or statistical techniques to solve problems in fields such as physical and biological science, engineering, social science, business and economics.
- Actuaries apply mathematics, probability, statistics and risk theory to calculate future risks for insurance and annuity premiums and benefits.
- Computer systems analysts design computer systems to meet clients' information processing or computation needs. They also plan and implement computer security systems.
- Computer programmers write computer programs and software packages and maintain existing computer programs.

## Full-Time Earnings

1993

\$57,000

\$40,700

\$24,100

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group usually require a university degree in their field of work.

- Mathematicians and statisticians must have a graduate degree in mathematics or statistics.
- Actuaries usually need a university degree or college diploma in mathematics, statistics or operations research, three years' actuarial experience and accreditation with the Canadian Institute of Actuaries.

## About these Occupations

148,000 workers were employed in this group as of 1994 — almost 60% more than in 1984. Employment grew by 17% economy-wide over the same period. Recent employment trends in these occupations are highly favourable.

- 95% of this group are computer analysts and programmers.
- 96% work full-time.
- The percentage of self-employment is somewhat lower than the average for all occupations, but it has doubled, from 6% to 12%, since the early 1980s.
- The percentage of women in this occupational group is much lower than the average and has decreased since 1989.
- There are few young workers due to the high level of education and experience required for these occupations.
- The unemployment rate is far below the average and is well below unemployment rates in other scientific professional occupations.
- Full-time earnings are well above the average of other occupations, but are lower than earnings in engineering.
- Employment does not fluctuate significantly with business conditions and is not seasonal.

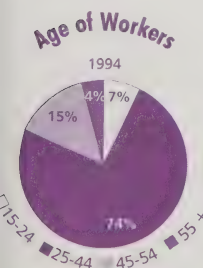
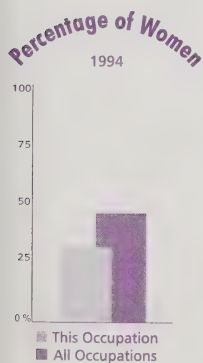
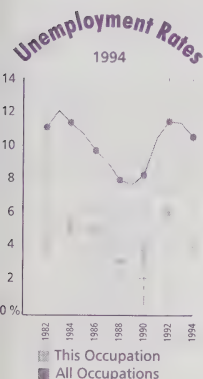
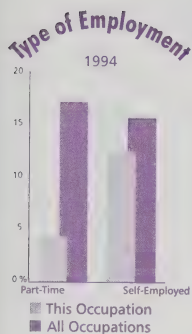
**Current labour market conditions in these occupations are very good.**

## Looking to the Year 2000

Labour market conditions for new workers in this group will improve slightly over the next five years, and will remain very good.

- Choice of specialized skills will be crucial to the success of newcomers in this field. Those who have the right skills will succeed, even at the expense of those with more experience. General demand for expertise in this field will continue to increase with the fall in computer prices and improvements in software applications.
- Job creation is expected to be centered in business services and finance, but employment growth is also expected to be strong in electrical and electronic products, wholesale trade, professional services and some areas of public administration.

**See also:** This Occupation Code: 216. Related Codes: 2162, 2163, Vol. 2 Field of Study Cross-index: U11, U35, U72, U74, C71. For further information, see **List of Associations**.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Computer Systems Analysts

## At Work

These analysts work in computer consulting firms and computer systems units throughout the private and public sectors. Their duties may require them to:

- Analyze and find computer solutions to clients' information processing, database or computation needs;
- Write requirement specifications for computer programs, identifying steps in the program and required algorithms;
- Test and implement computer programs and provide user training;
- Plan and implement computer security systems for database access control;
- Analyze databases, develop database directories and generate and maintain databases; and
- Supervise computer programmers or other systems analysts or serve as project leaders.

This occupation also includes business systems analysts, computer consultants, computer graphics specialists and electronic data processing analysts.

## Full-Time Earnings

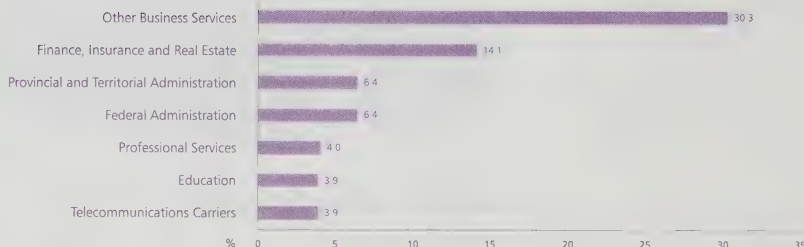
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These analysts must usually complete *either* a bachelor's degree, usually in computer science, mathematics, commerce or business administration, *or* a college program in computer science.

- They must usually have experience as computer programmers.
- Those who wish to specialize in commercial or engineering and scientific applications must take specific college or university studies or obtain experience in those applications.
- With experience, they may progress to supervisory or senior positions or become information systems and data processing managers.

## About this Occupation

83,000 workers were employed in this occupation in 1994 — a 59% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 96% work full-time.
- The percentage of women in this occupation is two thirds the average.
- Very few young persons are in this occupation, due to the high level of education and experience required. There are many more persons 15 to 24 years old in the entry-level position of programmer.
- The unemployment rate is far below the average.
- Full-time earnings are well above the average.
- Employment fluctuates somewhat with business conditions and is not seasonal.

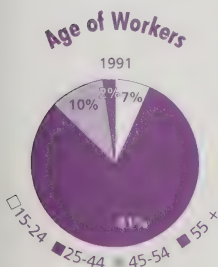
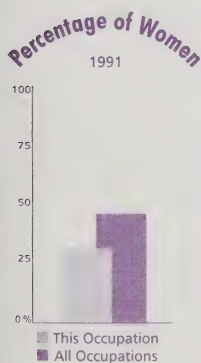
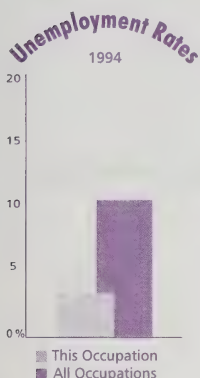
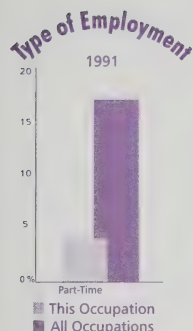
**Current labour market conditions in this occupation are very good.**

## Looking to the Year 2000

Labour market conditions in this occupation will improve slightly over the next five years, and remain very good.

- People in this occupation must respond to rapidly changing computer systems requirements and the needs of people working in this milieu. There will be intense demand for these skills.
- Good technical skills will not in themselves be sufficient. Highly successful systems analysts must possess enough people skills to understand the nature of the problems of those they are trying to help. Success will also be contingent on communications ability, to relay the solutions to problems.
- Although job growth for computer analysts is expected to be extremely strong across all industries, most new jobs are likely to occur in professional and business services, finance, insurance, real estate, electronic products and wholesale trade.

See also: This Occupation Code: 2162. Related Code: 216.  
Vol. 2 Field of Study Cross-index: U11, U35, U72, U74, C71.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Computer Programmers

## At Work

Computer programmers work in computer software and consulting firms and in programming units throughout the private and public sectors. Their duties may require them to:

- Write computer programs or software packages by coding instructions into machine-readable form;
- Test, debug, document and implement computer programs or software packages;
- Maintain existing computer programs by making minor changes as required; and
- Act as a resource person, solving computer problems for users.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Computer programmers must usually complete *either* a bachelor's degree in computer science or in another discipline with a significant programming component such as mathematics, commerce or business administration, or a college program in computer science.

- Those who wish to specialize in commercial or engineering and scientific applications must take specific college or university studies or obtain experience in those applications.
- With experience, they may progress to senior positions, such as programmer analyst, or become computer systems analysts.

## About this Occupation

59,000 workers were employed in this occupation in 1994 — a 65% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 95% work full-time.
- The percentage of women in this occupation is two thirds the average of all occupations.
- The age distribution in this occupation is somewhat younger than in the overall labour force, reflecting the entry-level character of many programming positions.
- The unemployment rate is far below the average.
- Full-time earnings are above average.
- Employment fluctuates somewhat with business conditions but is not seasonal.

**Current labour market conditions in this occupation are good.**

## Looking to the Year 2000

The labour market situation for this occupation will improve slightly over the next five years and remain good.

- More and more of these programmers will prepare in-house applications for problems unique to their organization as an increasing number of generic applications will satisfy everyday uses. Tremendous increases in computing power and improvements in programming languages guarantee that many new applications will need to be written.
- To maintain a successful career in this field, individuals must be prepared to learn new programming languages and techniques continually. Most techniques now in use will change many times over the course of a career.
- Programmers may move into more senior positions as analysts, or into sales or management positions.
- Demand for computer programmers is expected to be strong across almost all industries over the next five years. However, most new jobs will likely be created in the area of business services.

## Work Prospects

1995 to 2000

**Getting Better**

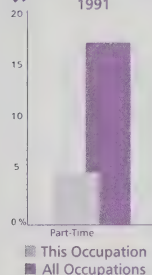
**Stable**

**Getting Worse**

How will labour market conditions change in this group?

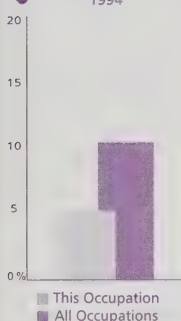
### Type of Employment

1991



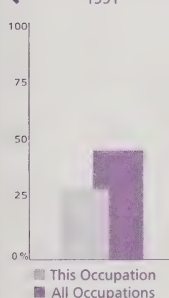
### Unemployment Rates

1994



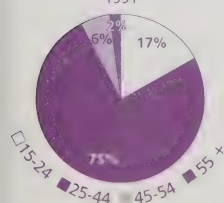
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 2163. Related Code: 216.  
Vol. 2 Field of Study Cross-index: U11, U35, U72, U74, C71.  
For further information, see List of Associations.



# Technical Occupations in Physical Sciences

## Full-Time Earnings

1993

\$58,900

\$40,100

\$21,800

## Highest, Average and Lowest\*

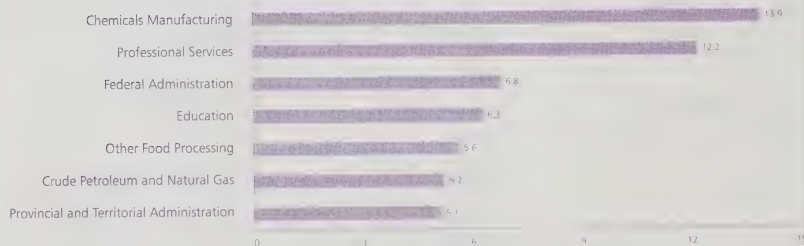
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in these occupations work in government, research and development and quality control laboratories, engineering and geological consulting firms, petroleum and mining companies, chemical, petrochemical, pharmaceutical and other manufacturing and processing industries, utilities, and health and educational institutions.

- Chemical technologists and technicians conduct laboratory tests, sampling programs, studies and other activities in chemical engineering, chemical and biochemical research, industrial chemistry, chemical quality control and environmental monitoring.
- Geological and mineral technologists and technicians conduct, or participate in, geological, geophysical, geochemical, hydrographic and oceanographic surveys, prospecting field trips, exploratory well drilling, keeping logs of wells and underground mine survey programs.

## Where They Work



## Education, Training and Experience

People in these occupations must have a high school diploma and usually require specialized training.

- Chemical technologists and technicians usually have a college diploma or certificate in chemical, biochemical or chemical engineering technology, or in a closely related discipline.
- Geological and mineral technologists and technicians usually need a college diploma in geological, petroleum, mining, mining engineering, hydrogeology or ground water, mineralogy, metallurgical or welding technologies.
- Geophysics technologists may require a college diploma in electronics technology.

## About these Occupations

37,000 workers were employed in this group as of 1994 — 15% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- 70% work as chemical technologists and technicians.
- 92% work full-time.
- The proportion of self-employment is half the average of all occupations but has increased since the early 1980s.
- The percentage of women in these occupations is two thirds the average but has increased over the last 10 years.
- There are relatively few young workers, due to the high level of education and experience required for this type of occupation.
- The unemployment rate is much lower than the average and is the lowest among technical scientific occupations.
- Full-time earnings are well above the average and are among the highest for technical scientific occupations.
- Employment fluctuates moderately with business conditions and is not seasonal.

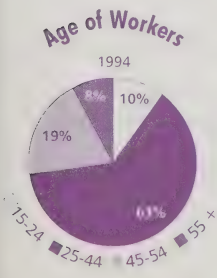
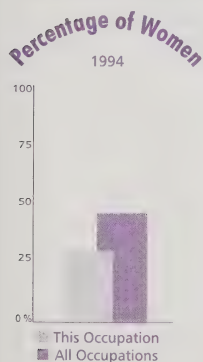
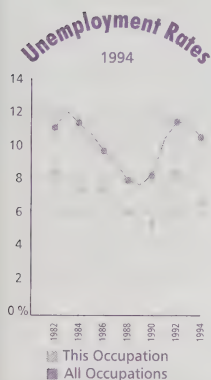
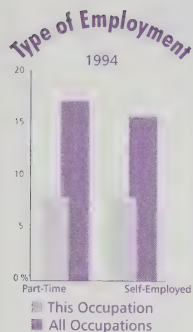
**Current labour market conditions are good in this group.**

## Looking to the Year 2000

Labour market conditions in these occupations will improve to very good over the next five years.

- The prospects in these occupations are primarily fuelled by the growth in labs that perform testing and monitoring functions. This will lead to improved job prospects for new entrants in spite of expected labour saving technological change.
- People who choose to work in this occupation must plan on intermittent periods of retraining as technology changes.
- Professional business services and the chemical industries are expected to be the major contributors to employment growth over the next five years. A smaller contribution to overall employment growth is expected from education, health and the pulp and paper industry.

**See also:** This Occupation Code: 221.  
Vol. 2 Field of Study Cross-index: M72, M73, U73, C34, C55.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Technical Occupations in Life Sciences

## Full-Time Earnings

1993



Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

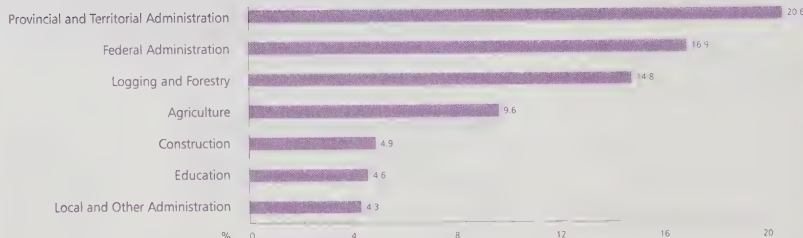
## At Work

People in these occupations work in government and throughout the private sector. They may also be self-employed.

- Biological technologists and technicians do biological tests, laboratory analyses, field tests and surveys in natural resources, agriculture and health sciences.
- Agricultural and fish products inspectors check agricultural and fish products to ensure that processing conforms to standards of production, storage and transportation.
- Forestry technologists and technicians work in forestry research, management, harvesting, resources, conservation and protection.
- Landscape designers and landscape architectural technologists and technicians assist landscape architects by surveying and assessing sites, and preparing drawings and sketches of landscape environments.

This group also includes conservation and fishing officers, horticulturists and other specialists in landscaping.

## Where They Work



## Education, Training and Experience

People in these occupations must have a high school diploma and usually require specialized training.

- Biological technologists and technicians usually need a college diploma or university degree related to agriculture, biology, microbiology, wildlife or resource management.
- Agricultural and fish products inspectors require a university degree or college diploma in agriculture, biology or a related program, or several years' experience in agricultural production or fish processing.
- Forestry technologists and technicians usually have a college diploma in a forestry technology, renewable resources or forest ranger program.

## About these Occupations

30,000 workers were employed in this group as of 1994 — 6% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- 25% work as biological technologists and technicians, and 25% as forestry technologists and technicians.
- 90% work full-time.
- The proportion of self-employment is below the average of all occupations and has been increasing more slowly than average since the early 1980s.
- The percentage of women in these occupations is two thirds the average of all occupations but has increased over the last 10 years.
- The age distribution of workers is similar to the overall work force.
- The unemployment rate approximates the average.
- Full-time earnings are slightly above the average of all occupations but are among the lowest for technical scientific occupations.
- Employment changes only moderately with business conditions but is subject to large seasonal fluctuations.

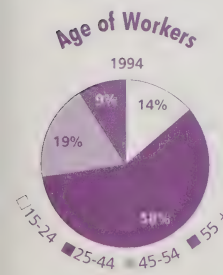
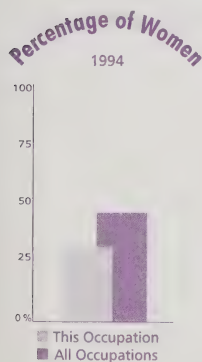
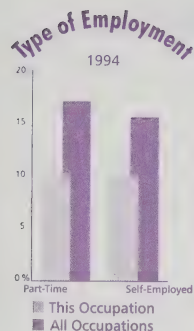
**Current labour market conditions in this occupational group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations will worsen somewhat over the next five years, but remain fairly good.

- Demand in life sciences is expected to continue to rise quickly, but most of the additional growth will be taken up by more highly educated professionals rather than technicians. Government restraint will also limit opportunities in some areas.
- In the future, success will depend on retraining as technology changes. In general, individuals have community college education, but some positions may be filled temporarily by university-educated workers.
- With little job growth expected in federal, provincial and local administration, most opportunities will be in the private sector and focused in the agriculture, fishing, aquaculture and recreation industries.

See also: This Occupation Code: 222.  
Vol. 2 Field of Study Cross-index: U64, U66, C62, C63.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?



# Technical Occupations in Civil, Mechanical and Industrial Engineering

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

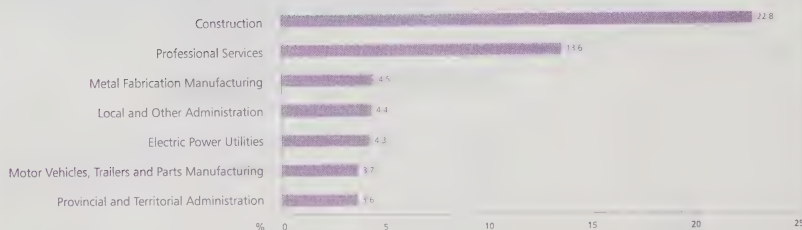
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in these occupations work in government, transportation, engineering consulting and construction companies, trade contractors, manufacturing and processing companies and many other industries.

- Civil engineering technologists and technicians provide support in the development of engineering designs from preliminary concepts, and prepare specifications and cost estimates for structural and municipal engineering, construction supervision, water resources, highways and other civil engineering projects.
- Mechanical engineering technologists and technicians provide support in the preparation of engineering designs, drawings and specifications for machinery, heating and ventilating systems, and for tools, moulds and other equipment.
- Industrial engineering technologists and technicians provide technical support in the development of production methods, facilities and systems, and in the planning, estimating, measuring and scheduling of work.

## Where They Work



## Education, Training and Experience

People in these occupations usually need a college diploma in their field of work.

- They usually require certification by a provincial association, which is obtained after several years' experience.
- Industrial engineering and manufacturing technologists and technicians usually do a college program in a technological area such as industrial engineering technology, pulp and paper, plastics, textiles or manufacturing.

## About these Occupations

35,000 workers were employed in this group in 1994 — an 18% gain over 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- Over half this group work as civil engineering technologists and technicians.
- 93% work full-time.
- The proportion of self-employment is below the average of all occupations but has increased since the early 1980s.
- The percentage of women in these occupations is much lower than the average, but has increased significantly since 1984.
- There are relatively few young workers, due to the high level of education and experience required.
- The unemployment rate is lower than the average.
- Full-time earnings are above average and are among the highest for technical scientific occupations.
- Employment fluctuates significantly with business conditions but is not seasonal.

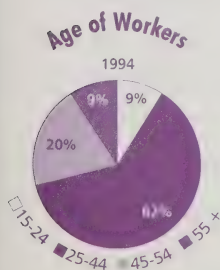
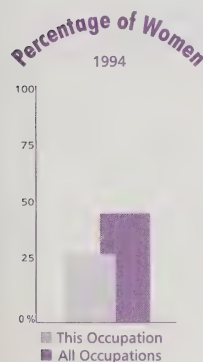
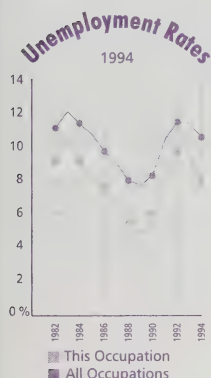
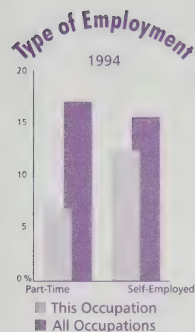
**Current labour market conditions are fairly good in this occupational group.**

## Looking to the Year 2000

Labour market conditions in this group will remain fairly good through the year 2000.

- Employment prospects in these occupations are determined by economic growth across a wide range of industries. Individuals in this group generally perform functions that are essential to many processes, which ensures their employment prospects.
- Individuals in this field may increasingly be required to obtain certification in their chosen fields in order to practise. This will involve intermittent retraining to keep up-to-date. Increased use of computers will also be a factor in their working lives.
- Professional business services are expected to lead job growth, for this occupation, over the next five years. Additional strength is expected from the construction and the automotive industries.

**See also:** This Occupation Code: 223.  
Vol. 2. Field of Study Cross-index: U35, U36, U37, C35.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





# Technical Occupations in Electronics and Electrical Engineering

## Full-Time Earnings

1993

\$56,300

\$34,900

\$20,900

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

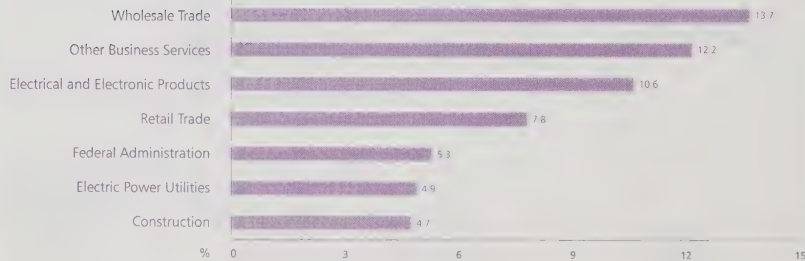
## At Work

People in these occupations work in wholesale and retail trade, business services, manufacturing, transportation, utilities, construction and the Canadian Forces.

- Electrical, instrumentation and electronics engineering technologists and technicians contribute expertise in the design, development, testing, production and operation of electrical and electronic equipment and systems and their application.
- Aircraft instrument, electrical and avionics mechanics and technicians repair and overhaul instrumentation, electrical and avionics systems.
- Avionics inspectors inspect and test aircraft systems.

This group also includes electronic service technicians and industrial instrument technicians.

## Where They Work



## Education, Training and Experience

People in this group need a high school diploma and specialized training.

- Electrical, instrumentation and electronics engineering technologists and technicians usually complete a college program in electrical or electronics technology, computer, instrumentation, telecommunications or the equivalent.
- Aircraft instrument and avionics mechanics and technicians usually complete a company-sponsored training program.
- Aircraft electrical mechanics and technicians may require a college electrical or electronics program.
- Avionics inspectors require a college program in avionics or electronics and three-to-five years' experience.

## About these Occupations

92,000 workers were employed in this group in 1994 — only 5% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are unfavourable.

- 59% are electrical service technicians.
- 95% work full-time.
- Self-employment is two thirds the average, but it has increased since the early 1980s.
- The percentage of women in these occupations is two fifths the average of all occupations and has not grown over the last 10 years.
- There are relatively few young workers, due to the high level of education and experience required.
- The unemployment rate is below the average.
- Full-time earnings are above average but among the lowest for technical scientific occupations.
- Employment fluctuates moderately with business conditions but is not seasonal.

**Current labour market conditions are fairly good in this occupational group despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions are expected to improve but remain fairly good over the next five years.

- The labour market in these occupations is dominated by the nature of the technology. Many people will work on servicing electronic machinery. However, with falling prices and increased miniaturization, the requirements for technicians are rapidly changing. Still, new products that require maintenance are constantly being released.
- Individuals can expect to spend time keeping current with changes in technology. Certification is increasingly a factor in this area.
- Job growth for this group is expected to be spread over a variety of industries led by electronic products, business services and wholesale trade.

## Work Prospects

1995 to 2000

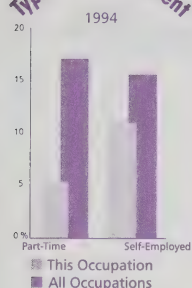
Getting Better

Stable

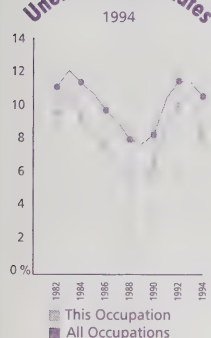
Getting Worse

How will labour market conditions change in this group?

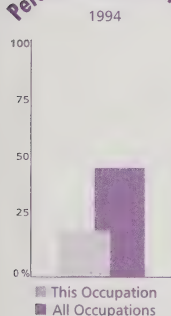
### Type of Employment



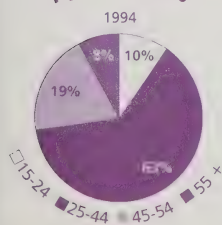
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code:224.  
Vol. 2 Field of Study Cross-index: U72, C38, C71, T310.  
For further information, see List of Associations.



# Technical Occupations in Architecture, Drafting, Surveying and Mapping

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

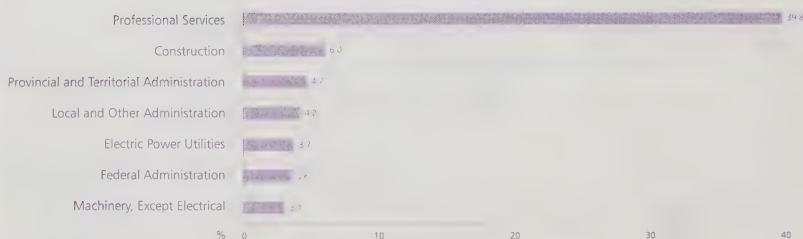
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work in government, architectural and construction companies, utility, resource and manufacturing industries, private sector design, surveying, mapping and computer software firms and other organizations.

- Architectural technologists and technicians research and prepare drawings and contracts for professional architects and civil design engineers.
- Industrial designers create and produce designs for consumer, industrial and business products.
- Drafting technologists and technicians use computer-aided design and drafting (CAD) and other drafting equipment to prepare designs and drawings.
- Survey technologists and technicians conduct or participate in field surveys to determine exact locations and positions of natural features and other structures.
- Mapping and related technologists and technicians prepare maps, interpret aerial photographs and operate airborne remote and in-house sensing and interpretive equipment, and the Geographic Information System (GIS).

## Where They Work



## Education, Training and Experience

People in this group usually require college or university education, or specialized training.

- Technologists usually need a two-to-three-year college program in their area of work.
- Technicians usually need a one-to-two-year college program in their area of work.
- They may require certification by a professional association and other memberships.

## About these Occupations

42,000 workers were employed in this group in 1994 — 5% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are unfavourable.

- Two thirds work as drafting technicians.
- The percentage of part-time workers is about half the average of all occupations.
- Self-employment is near the average of all occupations and has increased more quickly than average since 1984.
- The percentage of women in these occupations is somewhat more than half the average for all occupations.
- There are relatively few young workers, due to high educational requirements and slow employment growth in these occupations.
- The unemployment rate is somewhat lower than the average.
- Full-time earnings are above the average of all occupations.
- Employment fluctuates moderately with business conditions but is not seasonal.

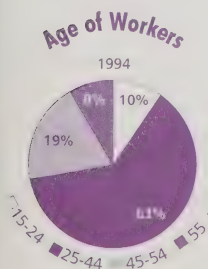
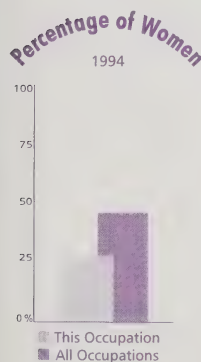
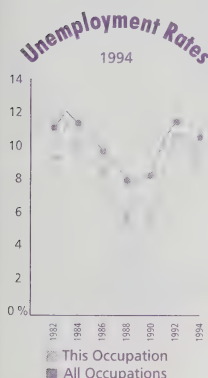
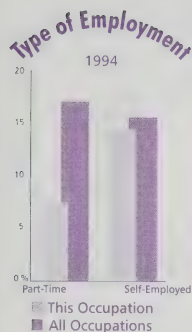
**Current labour market conditions in this occupational group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupational group are expected to remain fairly good through the year 2000.

- There may be few large-scale commercial architectural designs requiring large numbers of technicians in the near future. Most of the work in this field may be in maintaining existing buildings, home renovations and small-products designs.
- Rapid diffusion of computerized design technology and mapping systems will increase skill requirements in these fields.
- Almost half in this group are in professional business services which is where most employment growth will be over the next five years. A strong contribution to employment growth is also expected from machinery and electrical and electronic products manufacturing.

**See also:** This Occupation Code: 225. Related Code: 2253.  
Vol. 2 Field of Study Cross-index: U32, U37, C33, C35, C38.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





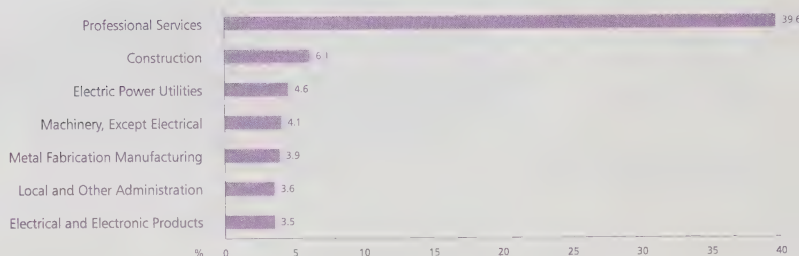
# Drafting Technologists and Technicians

## At Work

People in this occupation work in consulting and construction companies, in utility, resource and manufacturing companies, in all levels of government and in a wide range of other organizations.

- Drafting technologists develop and prepare engineering designs and drawings from sketches, engineering calculations, specification sheets and other data. They may write technical reports, submit construction specifications, costs and materials estimates, and prepare contracts and tender documents.
- Drafting technicians plan and prepare engineering drawings, plans, diagrams and layouts.
- They may work independently, in teams with engineers from many disciplines, or as support staff for engineers, architects and industrial designers.

## Where They Work



## Education, Training and Experience

People in this occupation must have a high school diploma.

- Drafting and design technologists usually complete a two-to-three-year college program in engineering design and drafting technology or in a related field.
- Drafting technicians usually complete either a one-to-two-year college program in drafting, or a four-year apprenticeship training in drafting, or a combination of four-to-five years' related work experience and college or industry courses in drafting.
- If they wish, draftspersons may obtain certificates of qualification from provincial apprenticeship authorities.
- Some employers require drafting technologists and technicians to obtain certification in engineering design and drafting technology or in a related field through provincial associations. This certification requires a period of supervised work experience, usually two years.
- With additional education or experience, they may specialize in civil, mechanical, electrical or other engineering design technologies.

## Full-Time Earnings

1993

\$55,200

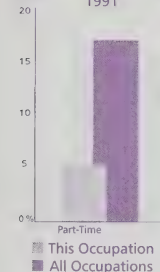
\$38,700

\$22,100

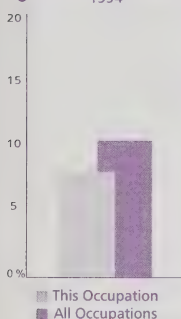
## Highest, Average and Lowest\*

\*full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

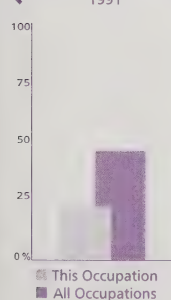
## Type of Employment



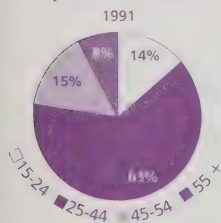
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About this Occupation

28,000 workers were employed in this occupation in 1994 — unchanged since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- 95% work full-time.
- The percentage of women in this occupation is approximately half the average of all occupations.
- The age distribution of workers in this occupation is similar to the overall work force.
- The unemployment rate is somewhat lower than the national rate.
- Full-time earnings are above the average of all occupations.
- Employment fluctuates with business conditions but is not seasonal.

**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain fairly good through the year 2000.

- There may be relatively few large-scale commercial and governmental design projects over the next five years. Most of the work in this field may be in maintaining existing buildings, home renovations and small-products designs. Employment in this occupation is, therefore, precarious.
- Rapid diffusion of computer-aided design technology will increase skill requirements in this occupation.
- Professional business services, the largest employing industry for this occupation, is expected to be the source of most of the job growth over the next five years. Construction, electrical and electronic products and machinery are also expected to make a significant contribution to growth.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

**See also:** This Occupation Code: 2253. Related Code: 225.  
Vol. 2 Field of Study Cross-index: U37, C33, C39, C312, T38.  
**For further information, see List of Associations.**



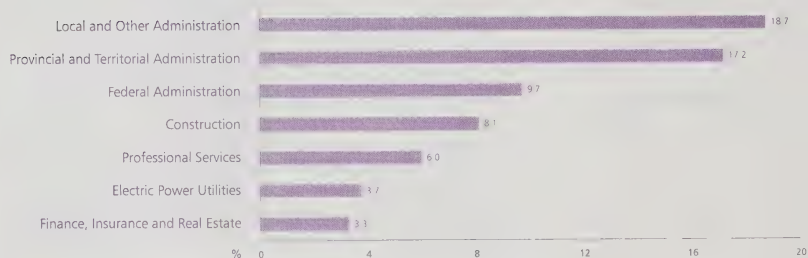
# Other Technical Inspectors and Regulatory Officers

## At Work

People in this group work in government, architectural and civil engineering consulting firms, construction, manufacturing, processing, transportation and energy companies, and in industrial inspection companies. They may also be self-employed.

- Non-destructive testers and inspectors operate ultrasonic, liquid penetrant, magnetic particle and other testing equipment to detect defects in objects of different compositions and materials.
- Engineering inspectors and regulatory officers inspect aircraft, boats, ships, cars and trucks, weighing and measuring devices, industrial instruments, processes and equipment.
- Inspectors in public health, environmental health and occupational health and safety inspect restaurants, plants, hotels, water systems and workplaces.
- Construction inspectors inspect the construction and maintenance of buildings, bridges, highways and industrial construction.

## Where They Work



## Education, Training and Experience

People in this group usually require certification.

- Non-destructive testers and inspectors require a high school diploma and completion of two years of a college or university engineering program.
- Engineering inspectors and regulatory officers need a college diploma or university degree in an appropriate field, or trade qualifications and extensive experience.
- Inspectors in public, environmental and occupational health and safety usually require a college diploma or university degree in food science, environmental studies, chemistry, health and safety or a related discipline.
- Construction inspectors must have a college diploma in construction, civil engineering or architectural technology plus several years' experience, or several years' experience as a qualified tradesperson.

## Full-Time Earnings

1993

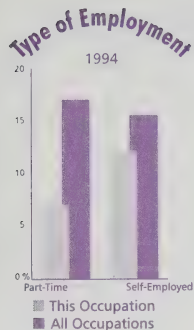
\$57,800

\$40,400

\$25,900

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

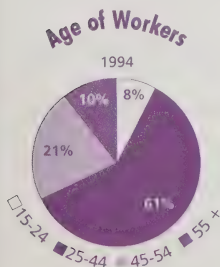
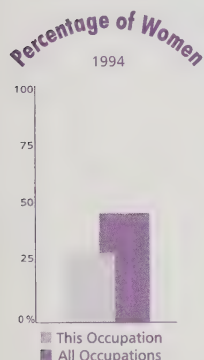
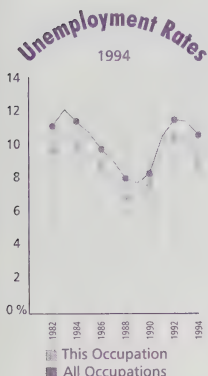


## About these Occupations

25,000 workers were employed in this group in 1994 — a 16% increase since 1984, slightly less than the 17% economy-wide increase in employment. Recent employment trends in this occupational group are favourable.

- 42% are health inspectors and 32% are construction inspectors.
- 93% work full-time.
- Self-employment is somewhat below the average of all occupations but has increased since 1984.
- The percentage of women in this type of occupation is more than half the average of all occupations and has increased faster than average over the last 10 years.
- There are few young workers due to the educational requirements and experience needed.
- The unemployment rate is somewhat below the national rate.
- Full-time earnings are well above the average.
- Employment fluctuates moderately with business conditions and is moderately seasonal.

**Current labour market conditions in this occupational group are fairly good despite weakness remaining from the 1991-92 recession.**



## Looking to the Year 2000

Labour market conditions in this occupational group are expected to remain fairly good through the year 2000.

- With ever-increasing pressure from the public and lobby groups for products that do not harm the environment, demand for this type of occupation should continue to increase in the future.
- Strong employment growth in professional business services and construction is expected over the next five years. The group's largest employers, provincial, local and federal administration are expected to see slower employment growth.

See also: This Occupation Code: 226.  
Vol. 2 Field of Study Cross-index: U11, U34, U35, U36, U37.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Transportation Officers and Controllers

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work in airline, air freight and air service companies, flying schools, the Canadian Forces, the Canadian Coast Guard, rail and marine transportation companies, and for port, canal and other marine authorities.

- Air pilots fly aircraft, including helicopters.
- Flight engineers monitor aircraft functions and may assist in flying aircraft.
- Flying instructors teach flying techniques and ground school subjects to student pilots, and train licensed pilots for additional certification.
- Air traffic controllers direct traffic at airports and in controlled airspace.
- Flight dispatchers authorize flights over assigned routes.
- Deck officers operate ships and other vessels and supervise deck crew activities.
- Engineer officers operate and maintain vessels' main engines and equipment and supervise engine room crew activities.
- Railway traffic controllers operate centralized traffic control systems.
- Marine traffic controllers regulate marine traffic using radar, remote radio systems and other telecommunications equipment.

## Where They Work



## Education, Training and Experience

People in this group usually must have a high school diploma and specialized training in their area of transportation.

- They may require certification or special licences such as pilots, air traffic control and radio licences.
- They may require training, special certificates and endorsements from Transport Canada.
- Transportation officers and controllers who work on ships and other vessels must usually complete a cadet program at a nautical or marine training institute or have several years' experience.

## About these Occupations

25,000 workers were employed in this group in 1994 — a 30% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

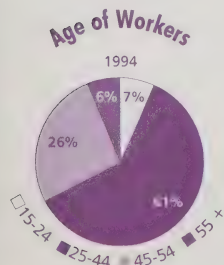
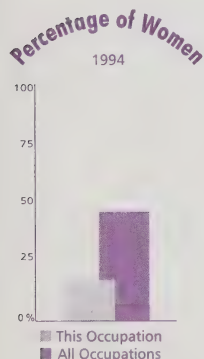
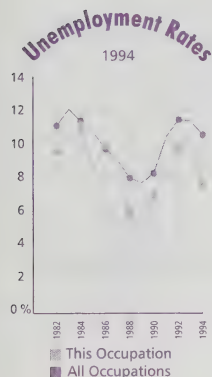
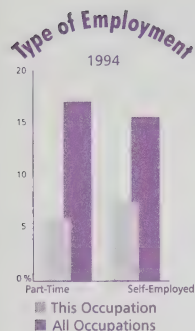
- 43% are pilots and 28% are officers in water transportation.
- 94% work full-time.
- Self-employment is half the average of all occupations.
- The percentage of women in this type of occupation is approximately one third the average of other occupations, but has almost doubled since 1984.
- There are few young workers, due to the training requirements and experience needed.
- The unemployment rate is somewhat below the national rate.
- Full-time earnings are well above the average.
- Employment fluctuates with business conditions and is very sensitive to seasonal factors.

**Current labour market conditions in this occupational group are fairly good.**

## Looking to the Year 2000

Labour market conditions in this group are expected to remain fairly good through the year 2000.

- Government subsidy reductions and proposed privatization of the Air Navigation System, airports and seaports may decrease employment opportunities in these areas. Continued fierce competition in the air transport industry may affect the demand for pilots.
- Air transportation, and federal and provincial administration are expected to provide most of the job growth for this group through to the year 2000. In contrast, rail and water transportation is expected to employ fewer workers from this group.



**See also:** This Occupation Code: 227. Related Code: 2271.  
Vol. 2 Field of Study Cross-index: U86, C314, T316, T317.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?



# Air Pilots, Flight Engineers and Flying Instructors

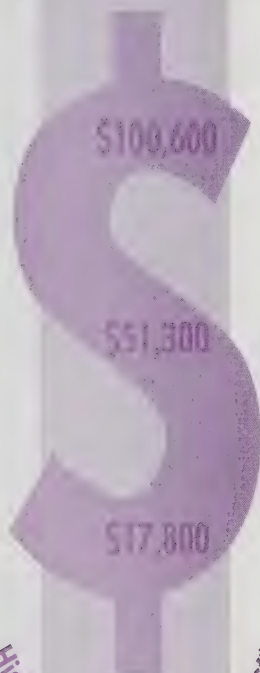
## At Work

People in this occupation work in airline and freight companies, flying schools, the Canadian Forces and for other public and private sector aircraft operators.

- Pilots fly fixed-wing aircraft and helicopters to transport passengers and freight and provide other services including search and rescue, aerial surveying and spraying and crop dusting. They may also test new aircraft.
- Flight engineers (second officers) monitor the engines, fuel consumption and functioning of aircraft systems during flight, and may assist in flying the aircraft.
- Flying instructors teach student pilots procedures and techniques of flying aircraft and ground-school subjects such as navigation, radio procedures and flying regulations.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this occupation must complete high school, graduate from a certified flying or aviation school and have a commercial pilots licence.

- People in this occupation may require a university degree or college diploma.
- Pilots may need additional licences or endorsements to fly different types of aircraft.
- Some employers may provide structured training for pilots and flight engineers.
- Flight instructors require Transport Canada ratings and endorsements to provide instruction on different types of aircraft.

## About this Occupation

11,000 workers were employed in this occupation in 1994 — 72% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- The percentage of part-time workers is slightly above the average of all occupations.
- Women make up only 3% of all workers in this occupation.
- There are few young workers due to the training requirements and experience needed.
- The unemployment rate is well below the national rate.
- Full-time earnings are well above the average of other occupations.
- Employment fluctuates with business conditions but is not seasonal.

**Current labour market conditions in this occupation are fairly good.**

## Looking to the Year 2000

Labour market conditions in this occupation will remain fairly good through the year 2000.

- Restructuring and increased competition in the air transport industry may affect the demand for pilots, although past restructuring did not decrease employment.
- In the long run, tele-conferencing, video-conferencing and interactive computer networks may reduce the need for business travel, consequently decreasing the need for pilots.
- Almost all new jobs for this occupation over the next five years are expected to be in the air transport industry, the occupation's largest employer.

## Work Prospects

1995 to 2000

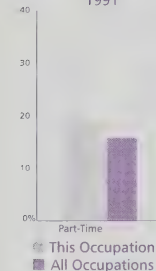
Getting Better

Stable

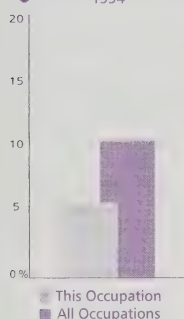
Getting Worse

How will labour market conditions change in this group?

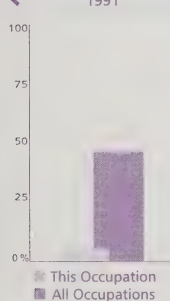
### Type of Employment



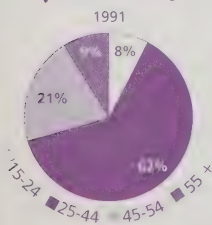
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 2271. Related Code: 227.  
Vol. 2 Field of Study Cross-index: U86, C38, C314.  
For further information, see List of Associations.





# Managers in Health, Education, Social and Community Services

## At Work

These managers work in hospitals and other health care institutions, educational institutions, social service and community agencies, correctional facilities, professional associations, political parties and other organizations.

- Managers in health care plan and direct the delivery of nursing, therapy, treatment and other services in hospitals and other health care organizations.
- Faculty administrators plan and direct academic and related activities of faculties. Registrars manage the registration activities and academic records at community colleges and universities.
- School principals plan and direct the activities of teachers and other staff in elementary and secondary schools.
- Vocational training school administrators plan and direct the activities of schools specializing in trades, business, technology and other vocational subjects.
- Administrators in elementary and secondary education plan and direct the academic affairs of a school district or system.
- Managers in social, community and correctional services plan and direct social and community service programs, the operations of correctional facilities, labour and professional associations, non-governmental organizations promoting social issues and political party offices.

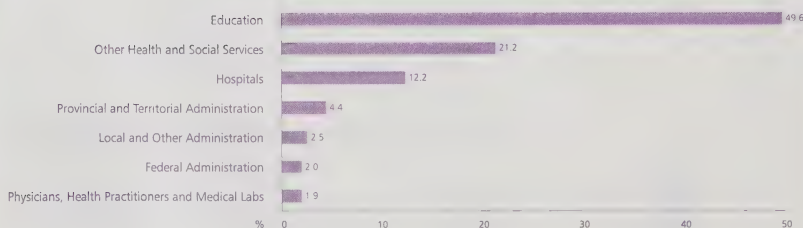
## Full-Time Earnings

1993



\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These managers usually require a bachelor's degree and, in some cases, a graduate degree in their field.

- They usually need several years' experience in a relevant profession, including supervisory experience.
- Health care managers and administrators usually have the same educational qualifications as the people they manage, such as physicians, dieticians and physiotherapists.
- Elementary and high school principals and administrators must have a teacher's certificate and several years' experience as senior teachers or department heads.

## About these Occupations

68,000 workers were employed in this group in 1994 — up 40% from 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this group are favourable.

- Half of these workers are managers in education.
- 91% of workers are employed full-time, well above average.
- Self-employment is somewhat lower than average.
- There were fewer women in 1984 than average, but their share has increased steadily and is now slightly above the national average.
- There are few young people in the group, reflecting the education and work experience required for managerial positions.
- The unemployment rate is about half the national average.
- Full-time earnings are much higher than the national average, as a result of education and experience, and the responsibilities given to managers.
- Employment is moderately affected by business conditions, but not by seasonal factors.

**Current labour market conditions in these occupations are good despite weakness remaining from the 1991-92 recession.**

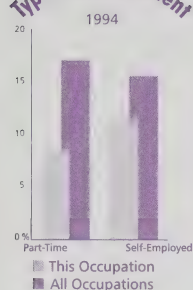
## Looking to the Year 2000

Labour market conditions in this group will remain good through the year 2000.

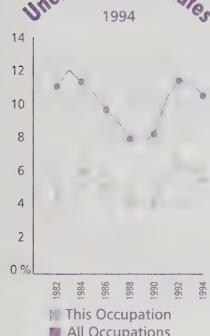
- The importance of lifelong learning and skills upgrading will require managers in education to conduct frequent curriculum reviews. To do so they must continually update their own skills.
- Improvements in medical technology and changes in health care delivery will increase the skill requirements of managers in health care.
- Fiscal restraint by governments and the restructuring of health and educational services may affect employment opportunities in these occupations.

See also: This Occupation Code: 031.  
Vol. 2 Field of Study Cross-index: M11, U11, U22, U86, C56.  
For further information, see List of Associations.

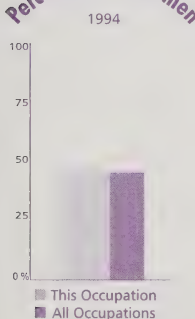
### Type of Employment



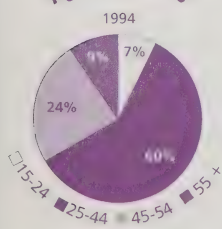
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Managers in Public Administration

## At Work

These managers work in government departments, agencies and legislative bodies. They direct the development, implementation and evaluation of government policies, research and programs, and manage and control human and financial resources.

- Government managers in health and social fields are concerned with the protection and promotion of health and social welfare for individuals and communities.
- Government managers in the field of economics are involved in areas such as taxation, labour markets, transportation, international trade and business development.
- Government managers in educational fields deal with elementary, high school, community college and university education.
- Other government public administration managers direct the operations of legislatures and other activities such as intergovernmental affairs and elections.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Most of these managers require a bachelor's degree related to their work and may also need a graduate degree.

- They usually require several years' experience in their profession or have government experience in specific areas of policy development, research or program administration.
- Some managers in health and social policy may need a college diploma, rather than a university degree, in their field of work.
- Some managers in health policy and program administration may require certification in a health profession. For example, city medical officers of health must be physicians.
- Managers in educational policy and program administration must have provincial teaching certificates.
- With experience, they may advance to senior management positions.

## About these Occupations

15,000 workers were employed in this group in 1994 — 29% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- A third of these workers are health and social policy administrators.
- 94% of workers are employed full-time, well above average.
- Self-employment is lower than average.
- Since 1984, the percentage of women has increased steadily, approaching the national average in 1994.
- There are few young people in these occupations, reflecting the work experience and schooling required for managerial positions.
- The unemployment rate is about half of the national average.
- Full-time earnings are much higher than the national average as a result of education and experience, and the responsibilities given to managers.
- Employment in this group is moderately sensitive to economic conditions but not to seasonal factors.

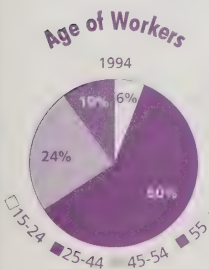
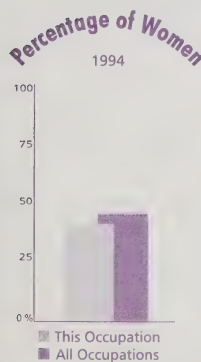
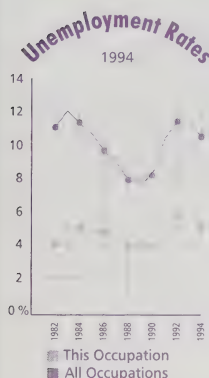
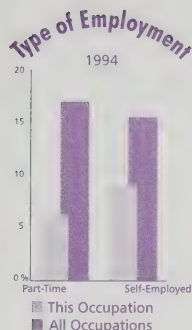
**Current labour market conditions in this group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to worsen somewhat over the next five years, but remain good.

- Decreased employment demand due to government cutbacks is likely to affect employment prospects in this group adversely.
- Individuals in information systems areas may be more successful in these occupations.
- Provincial and local administrations are expected to be the largest contributors to growth for this group as employment at the federal level declines. Opportunities in the private sector will be led by the finance, insurance and real estate industries.

See also: This Occupation Code: 041.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U85, U86.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Physicians, Dentists and Veterinarians

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work in government, hospitals, clinics and other health care institutions, public health facilities, universities, laboratories and animal clinics. They may work in private practice.

- Specialists in clinical medicine treat patients' diseases and physiological and psychiatric disorders and act as consultants to other physicians.
- Specialists in surgery perform and supervise surgical procedures.
- Specialists in laboratory medicine conduct laboratory tests to diagnose diseases and study the nature, cause and development of diseases.
- General practitioners and family physicians diagnose and treat patients, perform and assist at routine surgery and refer patients to specialists when necessary.
- Dentists diagnose and treat teeth and mouth disorders, design bridgework and fit dentures and other appliances. They may specialize in such areas as dental surgery and orthodontics.
- Veterinarians diagnose and treat diseases and disorders in animals, perform surgery and advise on their feeding, hygiene and general care.

## Where They Work



## Education, Training and Experience

People in this group need a college or university program in science and post-graduate training.

- They require provincial or territorial licences.
- They may require internships in their area of specialty.
- Veterinarians usually need two-to-four years of pre-veterinary college or university, a four-year university degree in veterinary science and national certification. In Quebec, they must be members of L'Ordre des médecins vétérinaires du Québec.

## About these Occupations

85,000 workers were employed in this group in 1994 — a 37% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

- 75% are physicians and 18% are dentists.
- 91% work full-time.
- 62% are self-employed, four times the average of all occupations, since many work in private practice.
- The percentage of women in this type of occupation is below the average of all occupations but has grown rapidly over the last 10 years.
- There are almost no young workers, due to the high level of education required for this type of occupation.
- There is almost no unemployment.
- Full-time earnings are double the average of all occupations, by far the highest of any occupational group.
- Employment does not fluctuate with business conditions and is not seasonal.

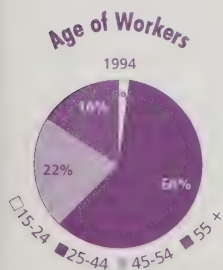
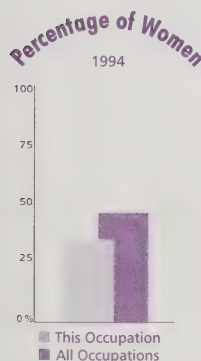
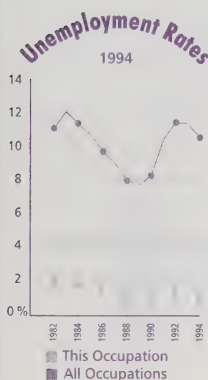
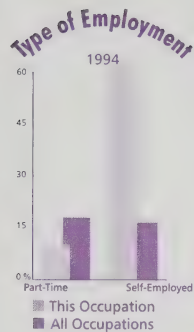
**Current labour market conditions in this occupational group are very good.**

## Looking to the Year 2000

Labour market conditions in this group are expected to worsen over the next five years but remain very good.

- For those individuals who are willing to work in rural areas, employment and wage prospects are much higher due to the shortage in these remote areas. Because there are a great many qualified school-leavers, competition in large metropolitan areas may be keen.
- With growth and ageing of the population, employment for this occupational group is expected to increase. The average rate of wages may fall slightly due to government pressure to reduce health care costs.
- Employment in private practice may decline over the next five years. However, employment growth is expected in hospitals, agriculture, education and health and social services.

**See also:** This Occupation Code: 311. Related Codes: 3111, 3112, 3113.  
Vol. 2 Field of Study Cross-index: U52, U55, U67, U86.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Specialist Physicians

## At Work

Specialist physicians work in private practice or hospitals.

- Specialists in clinical medicine diagnose and treat diseases and physiological or psychiatric disorders.
- Specialists in laboratory medicine study the nature, cause and development of human diseases.
- Specialists in surgery perform and supervise surgical procedures to correct physical abnormalities and deficiencies and repair injuries.

This occupational group also includes anesthetists, cardiologists, rheumatologists, medical biochemists, neuropathologists, obstetricians, ophthalmologists and thoracic surgeons.

## Full-Time Earnings

1993

\$152,500

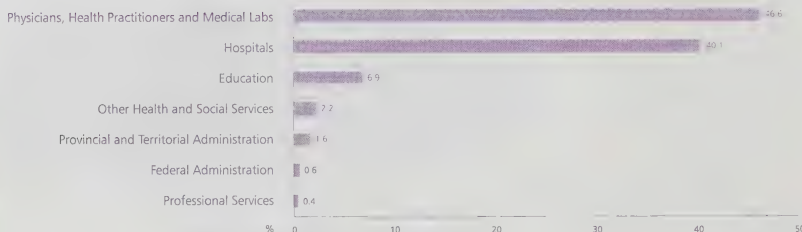
\$84,900

\$24,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Specialist physicians must complete a bachelor of science degree or, in Quebec, a college program in health science and one year of premedicine university studies; graduate from an approved medical school; acquire training in their specialty; complete the qualifying examination of the Royal College of Physicians and Surgeons of Canada; and be licensed by a provincial or territorial licensing authority.

- Specialists in clinical medicine require a one-to-two-year internship except in Quebec and three-to-four years of specialty training as a hospital resident. They may also require two further years of subspecialty training.
- Specialists in laboratory medicine require a one-to-two-year internship and four years' specialty training as a hospital resident.
- Specialists in surgery require a one-to-two-year internship and four-to-five years' specialty training as a hospital resident. They may also require two further years of subspecialty training.
- In Quebec, specialist physicians must belong to L'Ordre des médecins du Québec.

## About this Occupation

21,000 workers were employed in this occupation in 1994 — 43% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 94% work full-time.
- The percentage of women in this type of occupation is half the average of all occupations.
- There are almost no young workers, due to the high level of education and experience required for this occupation.
- There is almost no unemployment.
- Full-time earnings are more than double the average of all occupations.
- Employment does not fluctuate with business conditions and is not seasonal.

**Current labour market conditions for specialist physicians are very good.**

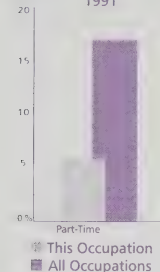
## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen over the next five years but remain very good.

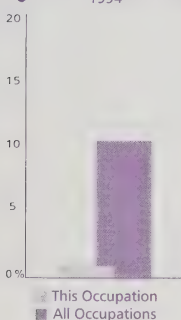
- For those who are willing to relocate to rural areas, employment and income opportunities will increase due to the lack of specialists in these isolated areas. A great many qualified graduates may make competition keen in metropolitan areas.
- Average future incomes may decline slightly due to government pressure to reduce health care costs, despite imminent increases in demand from an ageing population.
- Almost a quarter of Canadian specialist physicians were over 54 years old in 1991, so that death and retirement are likely to create many new openings in the long term.
- With very slow growth expected overall, most employment opportunities for specialists are expected to be in hospitals rather than private practice.

**See also:** This Occupation Code: 3111. Related Code: 311.  
Vol. 2 Field of Study Cross-index: U55, U64, U86.  
**For further information, see List of Associations.**

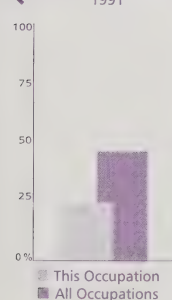
**Type of Employment**



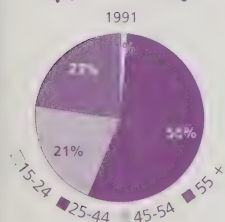
**Unemployment Rates**



**Percentage of Women**



**Age of Workers**



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

**How will labour market conditions change in this group?**





# General Practitioners and Family Physicians

## Full-Time Earnings

1993



Highest, Average and Lowest\*

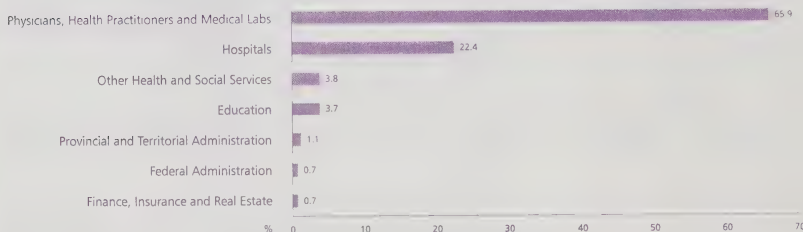
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

These physicians usually work in private practice to diagnose and treat the diseases, physiological disorders and injuries of their patients. Their duties may require them to:

- Evaluate their patients' health by examining patients, ordering laboratory tests, X-rays and other diagnostic procedures and consulting with other medical practitioners;
- Prescribe and administer medications and treatments, inoculate and vaccinate patients;
- Advise patients on health care;
- Perform and assist in routine surgery;
- Deliver babies and provide prenatal and postnatal care; and
- Report births, deaths and contagious diseases to government authorities.

## Where They Work



## Education, Training and Experience

These physicians must complete a bachelor of science degree or, in Quebec, a college program in health science and one year of premedicine university studies.

- They must graduate from an approved medical school.
- They must complete a one-to-two-year internship or two-to-three years' training in family medicine as a hospital resident.
- They must complete the qualifying examinations of the Medical Council of Canada and be licensed by the provincial or territorial licensing authority.
- In Quebec, they must belong to L'Ordre professionnel des médecins du Québec.
- With additional training, they may become specialist physicians.

## About this Occupation

43,000 workers were employed in this group in 1994 — 40% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 93% work full-time.
- The percentage of women in this occupation is over half the average of all occupations.
- There are very few young workers due to the high level of education and experience required for this type of occupation.
- There is almost no unemployment.
- Full-time earnings are about double the average of all occupations.
- Employment does not fluctuate with business conditions and is not seasonal.

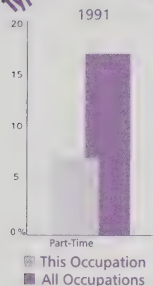
**Current labour market conditions in this occupation are very good.**

## Looking to the Year 2000

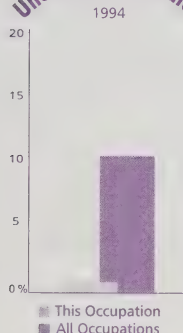
Labour market conditions for general practitioners and family physicians will worsen over the next five years but remain very good.

- For those who are willing to relocate to rural areas, employment and income opportunities will increase due to the lack of general practitioners in these isolated areas. Because of a large supply of qualified graduates, competition will be keen in metropolitan areas.
- Earnings may be somewhat sluggish over the next five years due to government pressure to lower health care costs, despite imminent increases in demand from an ageing baby-boom generation.
- With very slow growth expected overall, most employment opportunities for general practitioners and family physicians are expected to be in hospitals rather than in private practice.

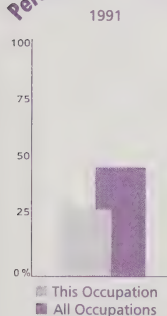
Type of Employment



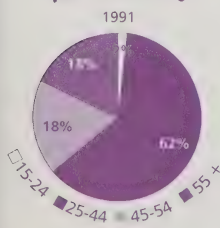
Unemployment Rates



Percentage of Women



Age of Workers



See also: This Occupation Code: 3112. Related Code: 311.  
Vol. 2 Field of Study Cross-index: M54, U55, U87.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Dentists

## At Work

Dentists may work in private practice or in hospitals, clinics, public health facilities and universities. They may specialize in areas such as oral surgery, pediatric dentistry and public health dentistry. Their duties may require them to:

- Examine patients' teeth, gums and surrounding tissue to diagnose disease, injury and decay;
- Restore, extract and replace diseased and decayed teeth and perform oral surgery, periodontal surgery and other treatments;
- Clean teeth and instruct patients on oral hygiene; and
- Design bridgework, fit dentures and provide appliances to correct abnormal positioning of the teeth and jaws.

This occupation also includes oral pathologists, oral radiologists, oral surgeons, orthodontists and prosthodontists.

## Full-Time Earnings

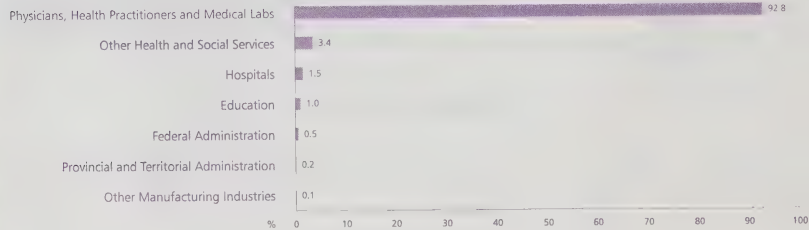
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this occupation must complete one-to-four years' pre-dental university studies or, in Quebec, a college program in sciences.

- They must complete a university degree from a recognized dental program and be licensed by a provincial or territorial governing body.
- Dentists in general practice may become specialists through advanced training. Specialists require an additional licence for their area of specialization.
- Dentists certified by the National Dental Examining Board of Canada may practise in any province and territory in Canada provided that they also meet the provincial and territorial requirements for licensing.
- In Quebec, they must belong L'Ordre des dentistes du Québec.

## About this Occupation

15,000 workers were employed in this occupation in 1994 — 30% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 88% work full-time, less than the percentage of physicians working full-time.
- The percentage of women in this occupation is one third of the average of all occupations.
- There are almost no young workers due to the high level of education and experience required for this occupation.
- There is almost no unemployment.
- Full-time earnings are substantially above the average of all occupations.
- Employment does not fluctuate with business conditions and is not seasonal.

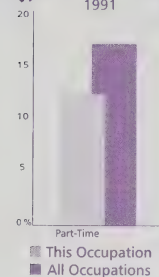
**Current labour market conditions for dentists are very good.**

## Looking to the Year 2000

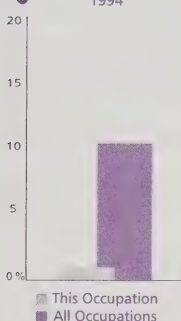
Labour market conditions for dentists are expected to worsen over the next five years but remain very good.

- Improved prevention of tooth decay and the use of dental hygienists may reduce employment growth in this occupation, while the increasing prevalence of dental insurance may have the opposite effect.
- Employment for dentists is expected to decline slightly over the next five years. Almost all are in private practice.

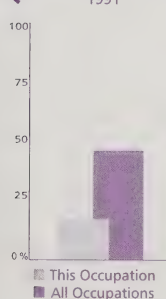
### Type of Employment



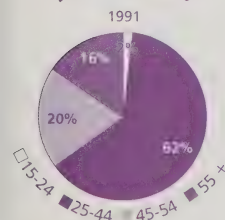
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 3113. Related Code: 311.  
Vol. 2 Field of Study Cross-index: U52, U53, U64.  
For further information, see List of Associations.



# Optometrists, Chiropractors and Other Health Diagnosing and Treating Professionals

## Full-Time Earnings

1993

\$105,000

\$58,100

\$15,200

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

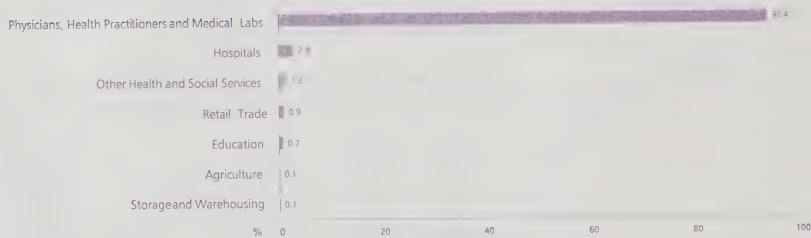
## At Work

People in this group work in clinics, community health centres and hospitals, or in private practice.

- Optometrists examine patients' eyes, prescribe and fit eyeglasses and contact lenses and recommend eye exercises and other treatments.
- Chiropractors diagnose and treat disorders of the spine and other body joints with manipulation and other techniques.
- Osteopathic physicians diagnose and treat patients' muscular, skeletal, circulatory and nerve disorders and injuries with manipulative therapy, medication and surgery.

This occupational group also includes orthoptists, naturopaths, podiatrists and chiroprodists.

## Where They Work



## Education, Training and Experience

People in this group must complete either a college or university program and may require provincial licences and membership in professional associations.

- Optometrists require a one-to-three-year college program with mathematics and science courses and a four-year university degree in optometry.
- Chiropractors must complete three years' university science studies, obtain a degree from an accredited chiropractic college and pass the Canadian Chiropractic Examining Board exams.
- Orthoptists require two years' education after high school in a science specialization, two years' hospital-based training and supervised practical training.
- Osteopathic physicians require a university degree, a four-year osteopathic medicine program and a one-year internship.

## About these Occupations

About 8,000 workers were employed as optometrists, chiropractors and other health professionals in 1994. Employment in these occupations has grown by 37% since 1984 — more than twice the national average of 17%. Recent employment trends in these occupations are highly favourable.

- 42% are optometrists, while 48% are chiropractors. Almost all of these workers (93%) are employed in private practice.
- 14% work part-time, slightly below the average of all occupations.
- Self-employment in these occupations is almost three times the national average.
- Close to half the workers in these occupations are women, somewhat more than the national average.
- There are few young workers, due to the high level of educational requirements in these occupations.
- The unemployment rate is extremely low.
- Full-time earnings are higher than average by two thirds.
- Employment in these occupations fluctuates little with business conditions and is not seasonal.

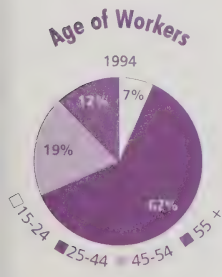
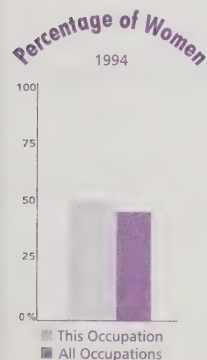
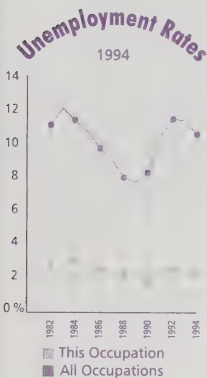
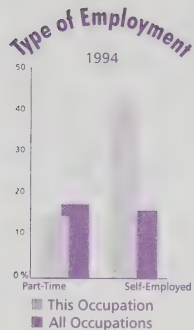
**Current labour market conditions for this group are very good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to worsen somewhat over the next five years, but remain very good.

- The rising average age of the Canadian population will result in a need for more health services, increasing demand in these occupations.
- People in these occupations should not be affected by public sector decisions to curtail costs as most of them work in private practice and are not covered by provincial health plans. The rapid development of new technologies means that people in these occupations must update their knowledge.
- Over 90% of new jobs are expected to be created in the private health care industry. Only a small portion are expected to come from hospitals, education or other industries.

**See also:** This Occupation Code: 312.  
Vol. 2 Field of Study Cross-index: U52, U55, U57, U67.  
**For further information, see List of Associations.**



## Work Prospects 1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?



# Pharmacists, Dietitians and Nutritionists

## Full-Time Earnings

1993



\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

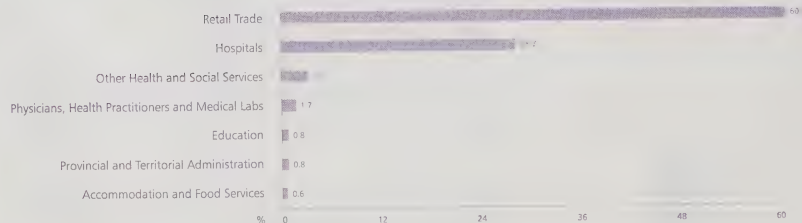
## At Work

People in this group work in government, pharmacies, hospitals and other health care institutions, pharmaceutical manufacturing establishments, industry and educational institutions.

- Community and hospital pharmacists prepare and dispense prescribed drugs and other medicines, advise on the use of drugs and medications, and maintain records of customers' medications.
- Industrial pharmacists participate in the research, development, testing and manufacture of pharmaceutical products. They also develop information materials on the uses and properties of particular drugs and evaluate the labelling, packaging and advertising of drug products.
- Dietitians and nutritionists plan, conduct and supervise diet food service programs and provide nutrition counselling and consulting services. They also conduct research to improve the nutritional value, taste, appearance and preparation of food, and may specialize in different areas such as clinical, community or research dietetics, public health, food service administration or industry.

This occupational group also includes clinical pharmacists and people working in dietetics and nutrition such as clinical and community dietitians, nutrition and dietetics researchers and public health nutritionists.

## Where They Work



## Education, Training and Experience

People in this group need a university degree in their field of work.

- Pharmacists require a bachelor of science degree in pharmacy.
- Dietitians and nutritionists require a bachelor's or master's degree in dietetics, nutrition or a closely related field, one-to-two years' supervised training and registration with the provincial regulatory body. In Quebec, they must be members of L'Ordre des diététistes du Québec.

## About these Occupations

22,000 workers were employed in this occupational group in 1994 — 38% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this group are highly favourable.

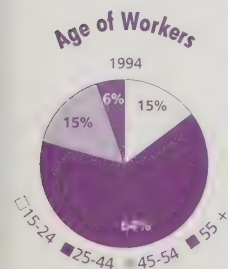
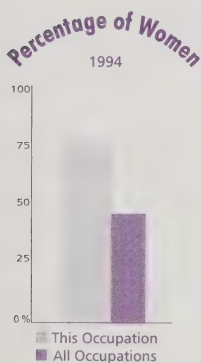
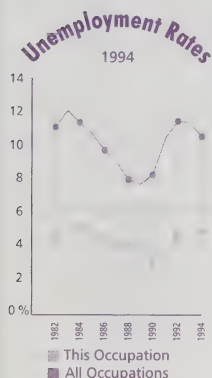
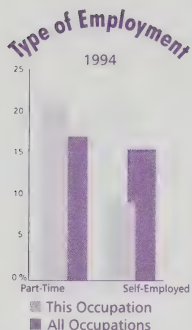
- 79% are pharmacists.
- About one in five workers were employed on a part-time basis in 1994, slightly above the average for all occupations.
- Self-employment is about half the national average.
- Women represent close to 75% of workers, almost double the national average.
- The proportion of workers under 35 years old is above average, probably due to rapid employment growth.
- The unemployment rate is much lower than the national average.
- Full-time earnings in this occupational group are at the national average.
- Employment in these occupations varies with business conditions but is not seasonal.

**Current labour market conditions for pharmacists, dietitians and nutritionists are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain good through the year 2000.

- As the Canadian population grows older, there is an increasing need for medical attention of all kinds. This should have a positive effect on employment demand in these occupations. These conditions may be offset by public sector decisions to curtail costs.
- Retail trade will continue to be the primary source of employment growth for this occupational group. Hospitals and health and social services are also expected to be a source of employment growth for this group.



**See also:** This Occupation Code: 313. Related Code: 3131.  
Vol. 2 Field of Study Cross-index: U57, C51, C55, C58.  
**For further information, see List of Associations.**

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Pharmacists

## At Work

Pharmacists work in community and hospital pharmacies, pharmaceutical firms, government departments and agencies and retail organizations.

- Community, hospital and retail pharmacists compound and dispense prescribed drug products for customers and health care professionals. They advise on the administration, use and effects of medications and maintain medication profiles of customers.
- Industrial pharmacists participate in the research, development and manufacture of drug products. They test new drug products, co-ordinate clinical investigations of new drug products, control the quality of drug products during production to make sure that they meet standards of potency, purity, uniformity, stability and safety, and evaluate the labelling, packaging and advertising of drug products.

## Full-Time Earnings

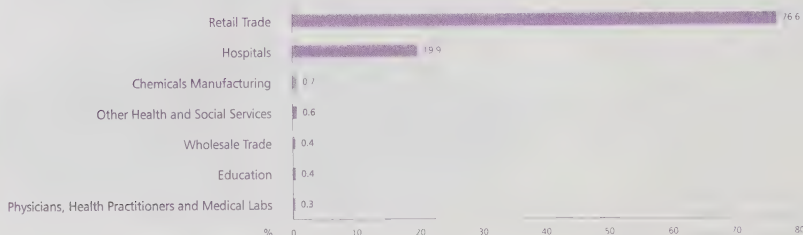
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Pharmacists must have a bachelor's degree in science with a major in pharmacy.

- Community and hospital pharmacists require supervised practical training and licences in their province or territory.
- In Quebec, they must be members of L'Ordre des pharmaciens du Québec.
- Managers of pharmacies or pharmacy departments must usually have experience as pharmacists.

## About this Occupation

17,000 people were employed as pharmacists in 1994 — 35% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 16% work part-time, about the average for all occupations.
- Over half the jobs are occupied by women, higher than the average for all occupations.
- A greater than average proportion of workers in this occupation is less than 35 years old, probably due to rapid employment growth.
- The unemployment rate is much lower than the national average.
- Full-time earnings are slightly above average.
- Employment in this occupation varies with business conditions but is not seasonal.

**Current labour market conditions for pharmacists are good despite weakness remaining from the 1991-92 recession.**

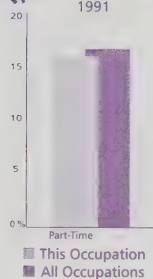
## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain good through the year 2000.

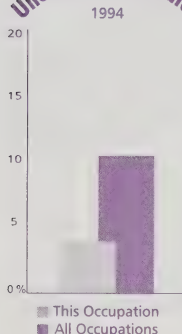
- As the Canadian population grows older, there will be an increasing need for medical attention of all kinds and for more and more drugs. This should have a positive effect on the demand for pharmacists.
- The role of pharmacists in hospitals is expanding, a trend which could strengthen demand. On the other hand, the increasing employment of pharmacy dispensing assistants could lessen it. Demand could also be weakened by government decisions to curtail costs in the health sector.
- The rapid development of new drugs for treatment and diagnosis means that pharmacists must update their knowledge. Computerized customer and pharmaceutical databases will require them to become increasingly computer literate.
- Retail trade should create almost all the new jobs for this occupation over the next five years. Hospitals and the chemical industries are expected to make a significant, but smaller, contribution to job growth.

**See also:** This Occupation Code: 3131. Related Code: 313.  
Vol. 2 Field of Study Cross-index: M57, U57, U64.  
**For further information, see List of Associations.**

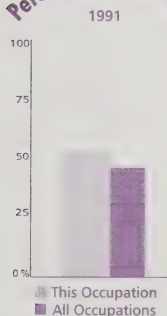
### Type of Employment



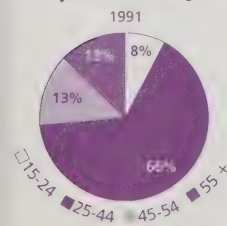
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Therapy and Assessment Professionals

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

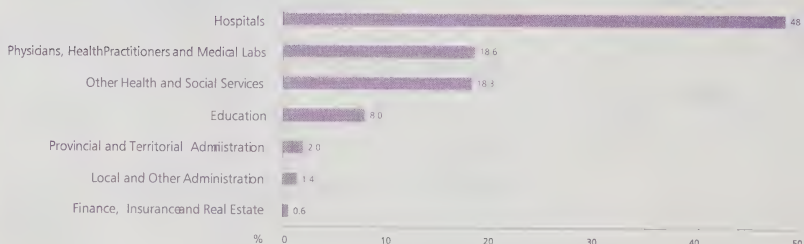
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work in hospitals, educational, rehabilitation and other health care institutions, prisons and recreational centres. They may also work in private practice.

- Audiologists diagnose, evaluate and treat hearing disorders.
- Speech-language pathologists diagnose, evaluate and treat speech, language and voice disorders.
- Physiotherapists assess patients' physical abilities, and plan and carry out treatment programs to maintain, improve and restore physical functions.
- Occupational therapists plan and carry out programs of manual and creative arts, vocational skills and recreational activity to assist patients with health problems.
- Art, dance, music, athletic and recreational therapists and remedial gymnasts plan and carry out specialized programs to aid in the treatment of mental and physical disabilities.

## Where They Work



## Education, Training and Experience

People in these occupations usually require a college or university program in their area of work, a period of supervised training and a form of accreditation such as licences or memberships in professional associations.

- Audiologists and speech-language pathologists usually require a master's degree in their area of work. They may require certification with their professional associations and licences in some provinces.
- Art therapists need a graduate degree in art therapy.
- Dance therapists must have a bachelor's degree in psychology or dance/movement therapy or an approved graduate program in dance/movement therapy.
- Remedial gymnasts require an approved college program in remedial gymnastics.

## About these Occupations

22,000 people were employed in the therapy and assessment professions in 1994 — a growth in employment of 30% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- About half these workers are physiotherapists and a quarter are occupational therapists. Nearly half work in hospitals.
- One out of four workers is employed on a part-time basis, significantly above the average for all occupations.
- There is little self-employment in these occupations.
- Women represent nearly 85% of employment, almost twice the national average.
- There are few young workers, due to the high level of educational requirements in these occupations.
- The unemployment rate is about one third of the national average.
- Full-time earnings are slightly below average, following strong gains in relative earnings over the last decade.
- Employment in these occupations is moderately sensitive to business conditions but is not seasonal.

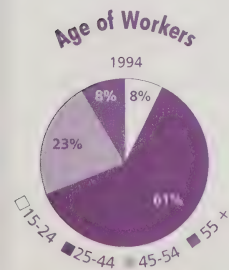
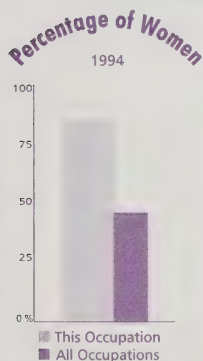
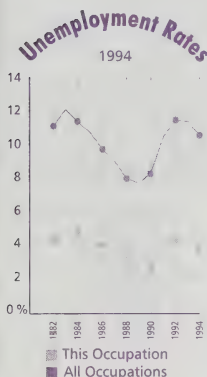
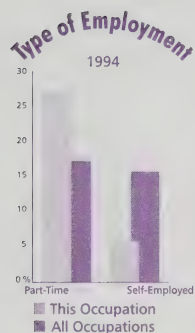
**Current labour market conditions for this group are very good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain very good through the year 2000.

- Greater emphasis on health promotion and disease prevention in society and an ageing population are likely to increase the demand for physiotherapists. The number of specialists in the rehabilitation field should continue to grow as new prostheses and orthotic devices are introduced and as new knowledge and skills become prerequisites for entering the profession.
- Most job creation is expected in the area of health practitioners and medical labs. This area should rival hospitals as the largest employer for this group by the turn of the century.

See also: This Occupation Code: 314. Related Codes: 3142, 3143. Vol. 2 Field of Study Cross-index: U56, U58, C56, T53. For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Physiotherapists

## At Work

Physiotherapists work in hospitals, clinics, rehabilitation centres and extended care facilities, or they may be in private practice. They may focus on particular clinical areas such as neurology, orthopedics, oncology or pediatrics, or in the treatment of specific disorders or injuries such as cardiovascular disorders, burns or sports injuries. Their duties may require them to:

- Plan and implement individually designed programs of physical treatment to maintain, improve or restore patients' physical functions, alleviate pain and prevent physical problems;
- Assess and test patients' physical abilities and evaluate their progress;
- Include exercise, manipulations, massage, hydrotherapy and the use of electrotherapeutic and other mechanical equipment as part of their programs;
- Maintain clinical and statistical records;
- Confer with other health care professionals;
- Develop and implement health promotion programs for patients, staff and the community;
- Conduct research in physiotherapy; and
- Act as physiotherapy consultants or educators.

## Full-Time Earnings

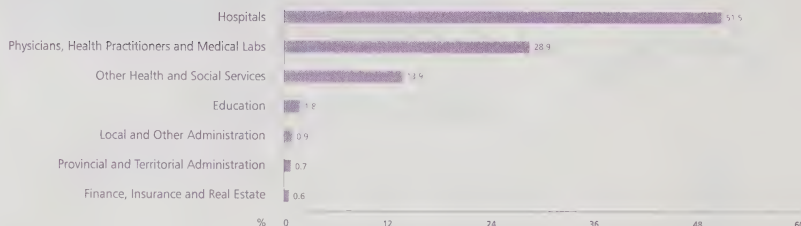
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Physiotherapists must have a university degree in physiotherapy and a period of supervised practical training.

- To practise, they must be registered with provincial and territorial regulatory boards.
- In Quebec, they must be members of L'Ordre des physiothérapeutes du Québec.

## About this Occupation

About 11,000 individuals were employed as physiotherapists in 1994 — 30% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- One out of four workers is employed on a part-time basis, significantly above the average for all occupations.
- Women represent 85% of workers in this occupation, almost double the national average.
- There are few young workers, due to the high level of educational requirements.
- The unemployment rate is very low.
- Full-time earnings in this occupation are at about the national average.
- Employment in this occupation is moderately sensitive to business conditions but is not seasonal.

**Current labour market conditions in this occupation are very good despite weakness remaining from the 1991-92 recession.**

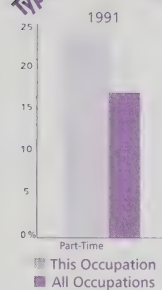
## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain very good through the year 2000.

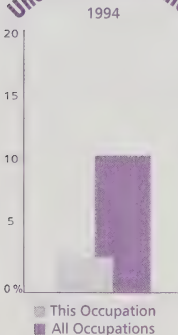
- Greater emphasis on health promotion and an ageing population are likely to increase the demand for physiotherapists.
- Almost all job creation is expected to be in the health practitioners and medical lab industry which should surpass hospitals as the largest employing industry for this occupation within the next few years.

See also: This Occupation Code: 3142. Related Code: 314.  
Vol. 2 Field of Study Cross-index: U23, U58, U86, C84.  
For further information, see List of Associations.

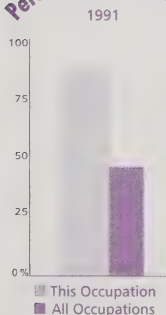
Type of Employment



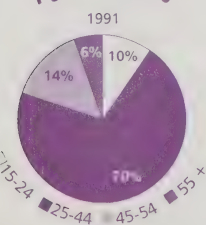
Unemployment Rates



Percentage of Women



Age of Workers



Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Occupational Therapists

## At Work

Occupational therapists work in health care institutions and schools and for social agencies. They may specialize in working with a specific age group such as children or elderly people, or with clients who have a specific disability such as arthritis or schizophrenia. Their duties may require them to:

- Plan and implement individually designed programs for patients with physical or mental health problems to help them to care for themselves and engage in work and recreational activities;
- Assess patients' emotional and physical capacities and evaluate their progress;
- Include manual and creative arts, industrial and vocational skills, and recreational activities in their programs;
- Maintain clinical and statistical records;
- Advise on health risks in the workplace or participate in other programs such as pre-retirement programs to prevent physical or mental health problems;
- Conduct research in occupational therapy; and
- Act as occupational therapy consultants or educators.

## Full-Time Earnings

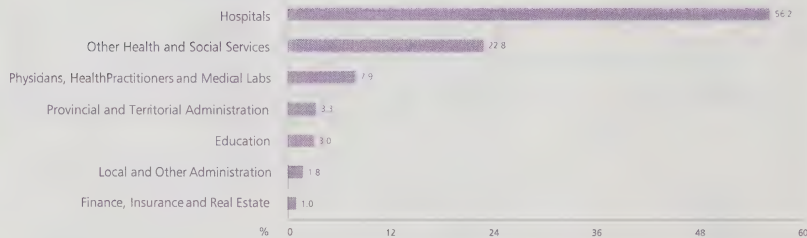
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Occupational therapists must complete a university degree in occupational therapy or rehabilitation, including a period of supervised practical training, and pass a national certification examination.

- They must be licensed or registered with a provincial regulatory board.
- In Quebec, they must be members of L'Ordre des ergothérapeutes du Québec.
- To specialize in a particular area, they may need additional training or further experience in that area.
- With experience, they may progress to management positions such as director of occupational therapy.

## About this Occupation

6,000 workers were employed as occupational therapists in 1994 — 25% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- One out of five workers is employed part-time, slightly above the average for all occupations.
- 90% of workers in this occupation are women, nearly twice the national average.
- There are few young workers, due to the high level of schooling required for this occupation.
- The unemployment rate is significantly lower than the national rate.
- Full-time earnings in this occupation are below the national average.
- Employment in this occupation is moderately sensitive to economic conditions but is not seasonal.

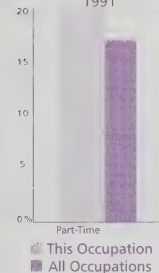
**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

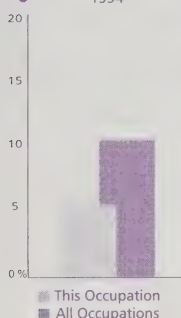
Labour market conditions in this occupation are expected to remain good through the year 2000.

- Job growth in this field may be influenced by increasing acceptance of rehabilitation as a practical alternative to institutionalized care.
- An increasing elderly population and growing attention to the needs of disabled persons will raise the demand for occupational therapists. However, the increased use of rehabilitation aides and government fiscal restraints in health care budgets may weaken the demand for occupational therapists.
- In contrast to physiotherapists, employment growth for this occupation is spread over more industries. Health practitioners and medical labs, hospitals, education and other service industries make strong contributions to employment growth.

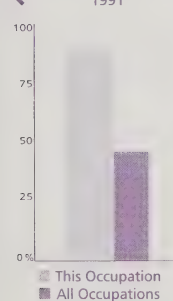
Type of Employment



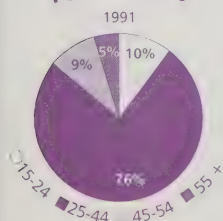
Unemployment Rates



Percentage of Women



Age of Workers



See also: This Occupation Code: 3143. Related Code: 314.  
Vol. 2 Field of Study Cross-index: U58, U86, U89, C85.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Nursing Supervisors and Registered Nurses

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

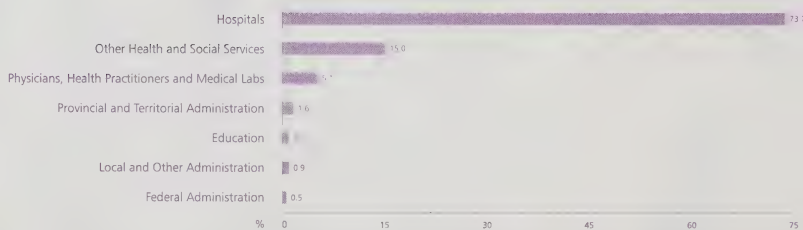
## At Work

These nurses work in government, hospitals and other health care institutions, nursing agencies, doctors' offices, companies and private homes. They may also be self-employed.

- Head nurses and supervisors supervise and co-ordinate the activities of registered nurses and other nursing personnel.
- Registered nurses provide nursing care to patients and may specialize in surgery, neurology, emergency, intensive care, obstetrics or other areas of health care.
- Occupational health nurses develop and implement employee health education programs and provide nursing services in the workplace.
- Community health nurses provide health education and nursing care in public health units and through home visits.
- Psychiatric nurses provide nursing care to patients in psychiatric hospitals and mental health clinics.

This occupational group also includes nursing consultants and nursing researchers.

## Where They Work



## Education, Training and Experience

These nurses (except registered psychiatric nurses) must complete a college, university or other approved registered nursing program. They must obtain provincial licences and may require membership in their professional associations.

- Head nurses and supervisors need experience as registered nurses and may require a university degree or other studies in management or administration.
- To specialize, registered nurses must have additional academic training or experience. A master's or doctoral nursing degree is usually required for clinical nurse specialists, clinicians and consultants.
- Registered psychiatric nurses require completion of a college or other registered psychiatric nursing program.

## About these Occupations

246,000 people worked in these occupations in 1994 — a 26% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- Over 90% in these occupations work as registered nurses.
- Nearly 30% of these workers are employed part-time, almost double the average of all occupations.
- There is very little self-employment, but it is increasing in this occupational group.
- Close to 90% of the workers in this group are women.
- There are few young workers, reflecting the high level of educational requirements in this occupation.
- The unemployment rate is less than half the national average.
- Full-time employment earnings remain somewhat below the national average.
- Employment in these occupations is moderately sensitive to economic conditions but is not seasonal.

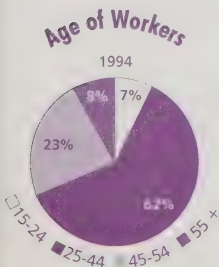
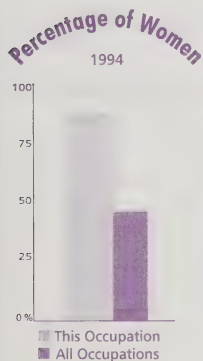
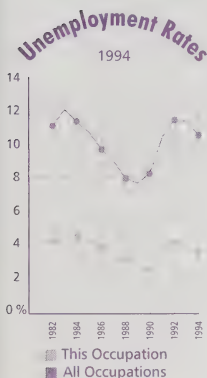
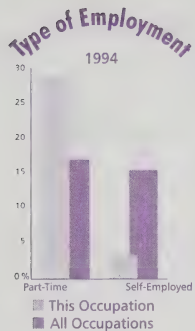
**Current labour market conditions in these occupations are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain good through the year 2000.

- The nurse's role is expected to change as more and more technology is introduced at the bedside and as the provincial governments allow nurses to perform more medical acts which have so far been restricted to physicians.
- Restructuring of the health care system, including the shift from institutional to home care (ambulatory services), as well as the ageing of the Canadian population will have positive effects on the demand for these occupations and will necessitate changes in skill requirements. Governments' efforts to reduce deficits may decrease opportunities in these occupations.
- The hospital sector will continue to be the largest employer for this occupational group, although job growth should be relatively weak. Stronger job growth is expected in the area of health practitioners' offices and medical labs, and in community and home care.

See also: This Occupation Code: 315.  
Vol. 2 Field of Study Cross-index: U56, U58, C56, T53.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting  
Better

Stable

Getting  
Worse

How will  
labour market  
conditions  
change  
in this  
group?



# Medical Technologists and Technicians (Except Dental)

## At Work

People in this group work in hospitals, clinics and other health care institutions, government and other research laboratories, radiological and medical laboratories, universities, respiratory home care services, medical devices manufacturing companies and other organizations.

- Medical laboratory technologists conduct experiments and analyses of medical specimens and samples.
- Medical laboratory technicians conduct supervised routine tests and maintain medical laboratory equipment.
- Pathologists' assistants assist at autopsies and examinations of surgical specimens and perform autopsies under supervision.
- Respiratory and radiation therapists, medical sonographers and radiography, nuclear medicine, cardiology, electromyography and electroencephalographic technologists perform diagnostic tests, X-rays and treatments.
- Clinical perfusionists operate and monitor circulation and other technical devices during open-heart surgery.
- Dietary technicians assist food service professionals.
- Prosthetists and orthotists design, build, fit and repair artificial limbs, braces and other prosthetics and orthotics.
- Prosthetic and orthotic technicians assist prosthetists and orthotists.

## Full-Time Earnings

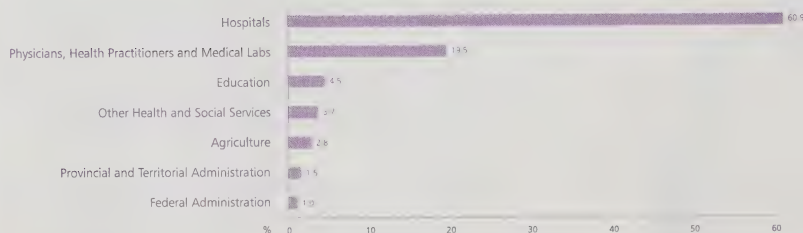
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group must have a high school diploma and specialized training.

- Most need a college program and supervised practical or clinical training.
- Many require registration or certification with their professional associations.
- Some need a provincial or territorial licence in their field of work.

## About these Occupations

74,000 workers were employed in these occupations in 1994 — an increase of 36% from 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

- Most workers in this category are either medical laboratory technicians (31%), medical laboratory technologists and pathology assistants (26%) or medical radiation technologists (19%).
- 21% work part-time, somewhat more than the average of all occupations.
- Self-employment is two thirds the average of all occupations.
- Over 70% of the workers are women, far above the average for all occupations.
- Workers 25 to 34 years old are substantially overrepresented in these occupations.
- The unemployment rate is about half the national average.
- Full-time earnings are at average levels.
- Employment in these occupations is moderately sensitive to changes in business conditions but is not seasonal.

**Current labour market conditions in these occupations are good despite weakness remaining from the 1991-92 recession.**

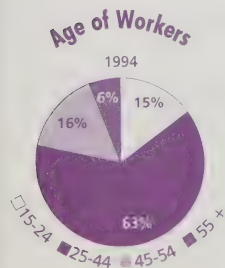
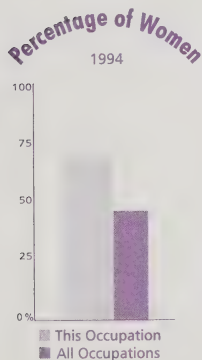
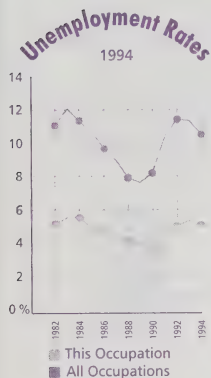
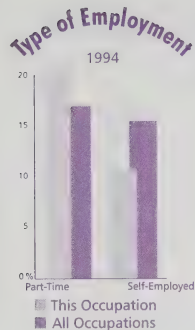
## Looking to the Year 2000

Labour market conditions in these occupations will remain good through the year 2000.

- DNA testing and new areas of detection of genetic disorders should increase the demand for medical technicians. This also means that they must update their skills periodically. Diagnostic kits will reduce laboratory workloads on the other hand.
- The restructuring of health care and public sector decisions to reduce health care expenditures are likely to affect these occupations.
- While hospitals will continue to be the largest employer and job generator for this group, the fastest job growth is expected to be in private health care practices and medical labs.

See also:

This Occupation Code: 321, Related Codes: 3211, 3212, 3215.  
Vol. 2, Field of Study Cross-index: U57, C51, C55, C58.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Medical Laboratory Technologists and Pathologists' Assistants

## At Work

People in this occupation work in medical laboratories in hospitals, private clinics, research institutions and universities.

- Medical laboratory technologists conduct medical laboratory tests, experiments and analyses to assist in the diagnosis, treatment and prevention of disease. They may conduct chemical analyses of body fluids, study blood cells and other tissue, and prepare tissue sections for microscopic examinations.
- Medical laboratory technologists may specialize in areas such as clinical chemistry, clinical microbiology, hematology, histotechnology and cytotechnology.
- Pathologists' assistants assist at autopsies and examinations of surgical specimens, or perform autopsies under pathologists' supervision. They may dissect, weigh and photograph organs and specimens for chemical analysis and record findings.

## Full-Time Earnings

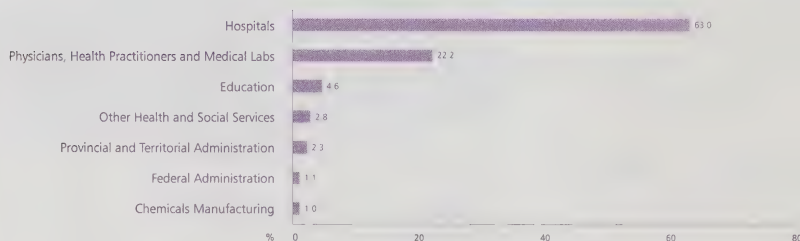
1993



## Highest, Average and Lowest\*

\* Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this occupation must have a postsecondary qualification.

- Medical laboratory technologists require either a bachelor of science or medical laboratory science degree or a two-to-three-year college program in medical laboratory technology. They must also have a period of supervised training.
- Employers usually require that medical laboratory technologists be certified by the Canadian Society of Laboratory Technologists.
- In Quebec, medical laboratory technologists must belong to L'Ordre professionnel des technologistes médicaux du Québec.
- Pathologists' assistants must have either a bachelor of science degree or training and experience as a registered nurse, registered nursing assistant or medical laboratory technologist. They must also have specialized on-the-job training.

## About this Occupation

19,000 workers were employed in this occupation in 1994 — 44% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- A somewhat lower than average proportion of workers are employed part-time.
- Over 80% of the workers are women, far above the average of all occupations.
- There are few young workers, reflecting the educational requirements in this occupation.
- Full-time earnings are slightly above average levels.
- The unemployment rate is slightly less than half the national average.
- Employment in this occupation varies moderately with economic conditions and is not seasonal.

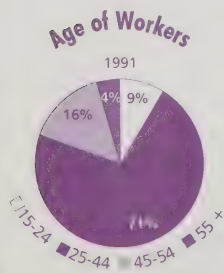
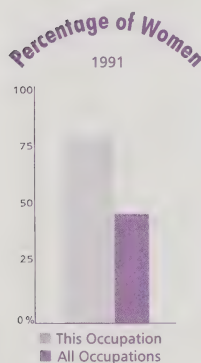
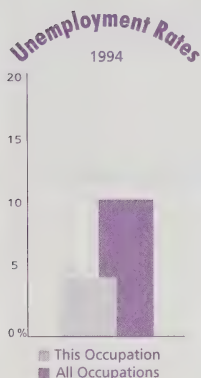
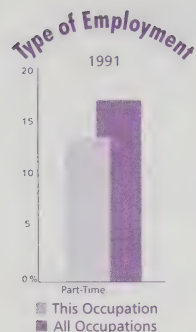
**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain good through the year 2000.

- A different view, expressed by the Canadian Society of Laboratory Technologists, is that current labour market conditions in this occupation are poor and will worsen over the next five years due to government cutbacks to health care funding.
- DNA testing and new areas of detection of genetic disorders should increase the demand for medical technologists and require that they update their skills periodically.
- The restructuring of health care and public sector decisions to reduce health care expenditures are likely to affect this occupation through reduced funding for tests and substitution of lower-paid technicians for technologists.
- Hospitals, health care practitioners and medical labs are expected to generate most of the job growth for this occupation. Smaller contributions to employment growth are expected from education and other health and social services.

See also: This Occupation Code: 3211. Related Code: 321.  
Vol. 2 Field of Study Cross-index: U53, U65, C55.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Medical Laboratory Technicians

## At Work

Medical laboratory technicians work in medical laboratories in hospitals, clinics, research institutes, universities and government research laboratories. Their duties may require them to:

- Collect blood tissue and other samples from patients;
- Log patient samples and prepare them for testing;
- Set up medical laboratory equipment;
- Conduct routine laboratory tests and sample analyses; and
- Clean and maintain medical laboratory and medical laboratory equipment.

## Full-Time Earnings

1993

\$43,800

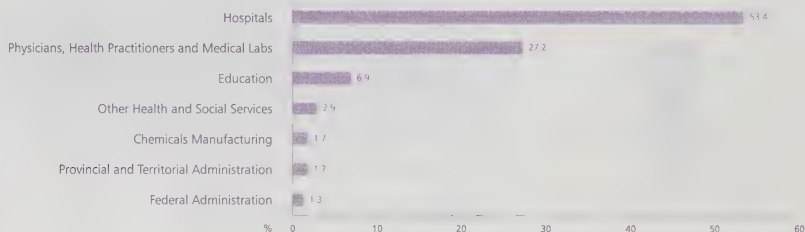
\$31,100

\$18,200

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Medical laboratory technicians must either complete high school and on-the-job training, or a one-to-two-year college program in medical technology.

- In Quebec, medical laboratory technicians must belong to L'Ordre professionnel des technologistes médicaux du Québec.

## About this Occupation

23,000 workers were employed in this occupation in 1994 — up 46% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- The proportion of part-time workers is about average.
- Over 80% of the workers are women, far above the average of all occupations.
- The 25-44 year age group is somewhat overrepresented in this occupation.
- The unemployment rate is considerably lower than the national average.
- Full-time earnings are slightly below average levels.
- Employment in this occupation varies moderately with business conditions and is not seasonal.

**Current labour market conditions for this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain good through the year 2000.

- DNA testing and new areas of detection of genetic disorders should increase the demand for medical technicians and will require that they update their skills periodically.
- The restructuring of health care and public sector decisions to reduce health care expenditures are likely to affect this occupation.
- Fairly strong job growth for medical laboratory technicians is expected in both hospitals and medical laboratories.

## Work Prospects

1995 to 2000

Getting Better

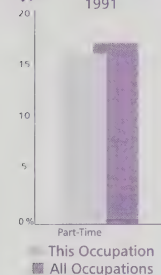
Stable

Getting Worse

How will labour market conditions change in this group?

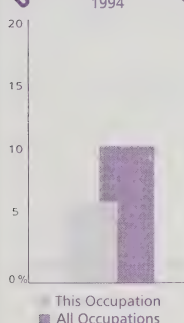
### Type of Employment

1991



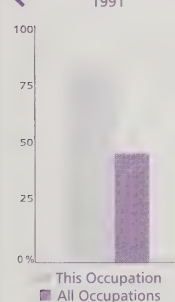
### Unemployment Rates

1994



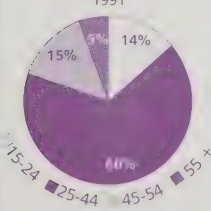
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 3212. Related Code: 321  
Vol. 2 Field of Study Cross-index: U65, C55, C58.  
For further information, see List of Associations.



# Medical Radiation Technologists

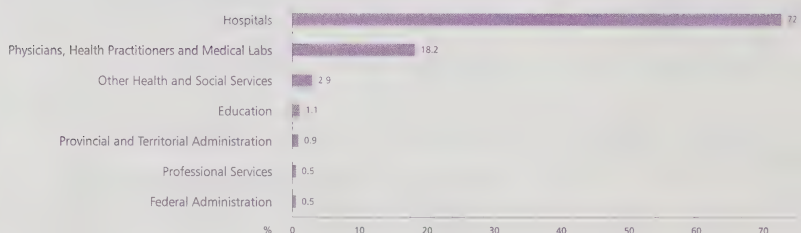
## At Work

People in this occupation work in hospitals, cancer treatment centres, clinics and radiological laboratories.

- Radiography technologists operate X-ray, radiographic and fluoroscopic equipment, specialized C.T. scanners and mammography units to produce images of the body for use by radiologists in the diagnosis of disease or injury.
- Nuclear medicine technologists operate radiation detection equipment such as gamma cameras, scanners, scintillation counters and ionization chambers to acquire information for use by nuclear medicine physicians in the diagnosis of disease.
- Radiation therapists operate linear accelerators, and cobalt 60, X-ray and other radiation therapy equipment to administer radiation treatment prescribed by radiation oncologists.

This occupation also includes mammography technologists, angiography technologists and magnetic imaging technologists.

## Where They Work



## Education, Training and Experience

Medical radiation technologists must complete a two-to-three-year college, hospital-school or other approved program in their specialty, diagnostic radiography for radiography technologists, nuclear medicine technology for nuclear medicine technologists and radiation therapy for radiation therapists.

- They must complete a period of supervised practical training.
- They must be certified by the Canadian Association of Medical Radiation Technologists or a provincial counterpart or an appropriate provincial governing body.
- In Quebec, radiology technicians must belong to L'Ordre professionnel des technologues en radiologie du Québec.
- With experience, they may become supervisors, managers, commercial representatives and instructors.

## Full-Time Earnings

1993

\$51,000

\$39,100

\$23,100

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

14,000 people were employed in this occupation in 1994 — 20% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- A somewhat higher than average number of workers is employed part-time.
- Nearly 80% of the workers are women, a proportion far above the average of all occupations.
- Almost 70% of workers were between 25 and 44 years old, compared to 55% for the work force as a whole.
- The unemployment rate is less than half the national average.
- Full-time earnings are somewhat above average levels.
- Employment in this occupation varies moderately with economic conditions and is not seasonal.

**Current labour market conditions for this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain good through the year 2000.

- A different view, expressed by the Canadian Association of Medical Radiation Technologists, is that current labour market conditions for this occupation are only fairly good, rather than good. In their view, labour market conditions in this field over the next five years will depend on the extent to which governments fund the adaptation of new imaging technologies.
- Technological change, in particular the introduction of sophisticated imaging technologies, is expected to increase skill requirements for specialists in this field.
- Moderate job growth is expected to be centred primarily in hospitals, although medical laboratories are also expected to make a substantial contribution.

## Work Prospects

1995 to 2000

Getting Better

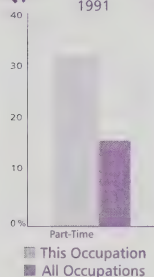
Stable

Getting Worse

How will labour market conditions change in this group?

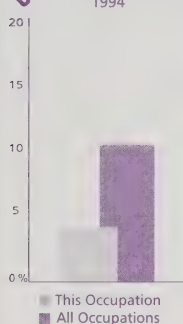
### Type of Employment

1991



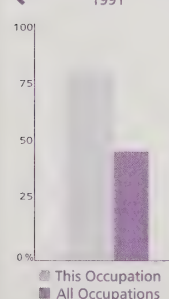
### Unemployment Rates

1994



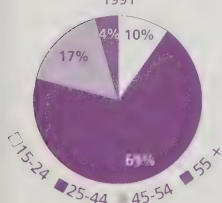
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 3215. Related Code: 321.  
Vol. 2 Field of Study Cross-index: U55, U65, C53, C55, C58.  
For further information, see List of Associations.



# Technical Occupations in Dental Health Care

## At Work

People in this group work in government, dentists' offices, hospitals, clinics, educational institutions, dental laboratories and private industry.

- Dental hygienists clean patients' teeth, provide other treatments and information on preventing dental problems, take X-rays and perform other related activities.
- Dental therapists working for the government in rural and remote locations provide limited dental services including filling cavities and extracting teeth.
- Dental technicians prepare and fabricate full and partial dentures and devices such as bridges, clasps and bands according to prescriptions from dentists and dental therapists.

This group also includes dental bench workers.

## Full-Time Earnings

1993



\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group must have a high school diploma and usually need a college program in their specialty.

- Some may require licensing in their province or territory.
- Dental technicians must complete a college program in dental technology or four or more years' on-the-job training with a dental technician. Licensing is available but not mandatory in all provinces. In Quebec, they must be members of L'Ordre professionnel des techniciens et techniciennes dentaires du Québec.

## About these Occupations

17,000 people were employed in these occupations in 1994 — an increase of 38% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

- 60% work as dental therapists and hygienists, and 30% as dental technicians and lab workers.
- The proportion of part-time workers is slightly above average and has been growing steadily since 1984.
- The proportion of self-employed workers is well below the national average.
- 75% of workers are women, well above the average for all occupations.
- A larger than average proportion of workers in these occupations is between the ages of 25 and 34.
- The unemployment rate is less than half the national average.
- Full-time earnings are at average levels.
- Employment varies moderately with economic conditions and is not seasonal.

**Current labour market conditions for this group of occupations are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations will remain good through the year 2000.

- As new products are introduced to fight tooth decay, fewer patients will be referred to dentists. This may adversely affect employment in this occupational group.
- For those entering the profession, new skills will be required to meet ever-changing technological requirements.
- Over the next five years, job growth is expected to be in the area of private practice, as well as in specialized manufacturing industries related to dentistry.

## Work Prospects

1995 to 2000

Getting Better

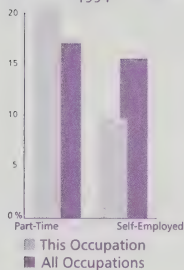
Stable

Getting Worse

How will labour market conditions change in this group?

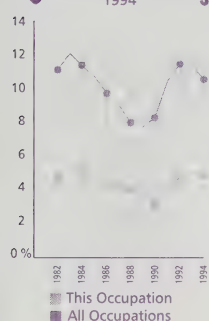
### Type of Employment

1994



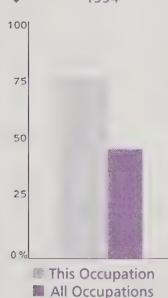
### Unemployment Rates

1994



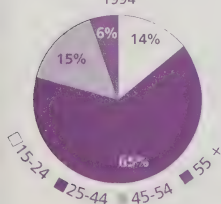
### Percentage of Women

1994



### Age of Workers

1994



**See also:** This Occupation Code: 322. Related Code: 3222.  
Vol. 2 Field of Study Cross-index: U57, C51, C55, C58.  
For further information, see List of Associations.





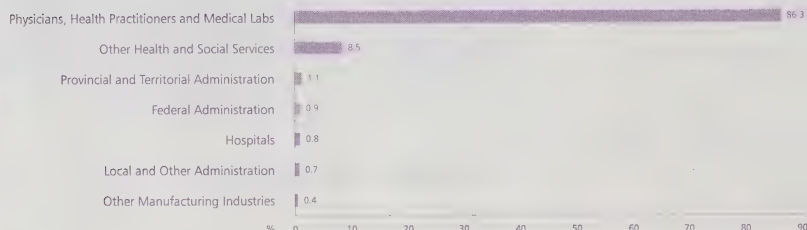
# Dental Hygienists and Dental Therapists

## At Work

Dental hygienists work in dentists' offices, hospitals, clinics, educational institutions, government agencies and private industry. Dental therapists work for the federal government and the governments of Manitoba, Saskatchewan and the Northwest Territories to provide services in rural and remote communities.

- Dental hygienists provide dental hygiene treatment and information related to the prevention of diseases and disorders of the teeth and mouth. They may take dental impressions, remove stains and deposits from teeth, take X-rays, clean and stimulate the gums and apply fluoride treatment.
- Dental therapists carry out limited dental services related to the prevention and treatment of diseases and disorders of the teeth and mouth. They may remove stains and deposits from teeth, take dental impressions and X-rays, fill cavities, extract teeth and replace portions of tooth crowns.

## Where They Work



## Education, Training and Experience

People in this occupation require specialized training following graduation from high school.

- Dental hygienists must complete a one-to-three-year college program or another approved program in dental hygiene recognized by the governing board within their province or territory. They must also be licensed by their provincial or territorial governing body.
- In Quebec, dental hygienists must belong to L'Ordre professionnel des hygiénistes dentaires du Québec.
- Dental therapists must complete the dental therapy program offered by Health Canada or an approved college program in dental therapy.
- Dental therapists must be licensed in Saskatchewan, Manitoba and the Northwest Territories.

## Full-Time Earnings

1993

\$58,900

\$38,500

\$17,800

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

9,000 people were employed as dental hygienists and therapists in 1994 — 57% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- The proportion of workers employed part-time is nearly twice the average of all occupations.
- 96% of workers in this occupation are women.
- A significantly larger than average proportion of workers in these occupations is 25 to 44 years old.
- The unemployment rate is less than half the national average.
- Full-time earnings are somewhat above average levels.
- Employment varies moderately with economic conditions and is not seasonal.

**Current labour market conditions for this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

The labour market situation for dental therapists is expected to remain good through the year 2000.

- It is expected that, as new products are introduced to fight tooth decay, fewer patients will be referred to dentists. This may adversely affect employment in the occupation.
- However, for those entering the profession, these new products will require new skills.
- Relatively strong job growth is expected to remain concentrated in private dental practices.

## Work Prospects

1995 to 2000

**Getting Better**

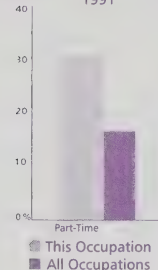
**Stable**

**Getting Worse**

How will labour market conditions change in this group?

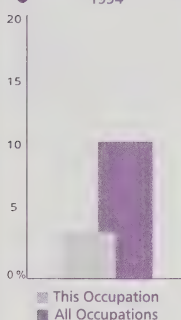
### Type of Employment

1991



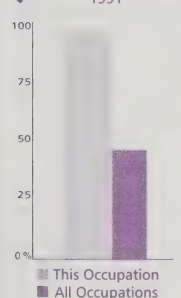
### Unemployment Rates

1994



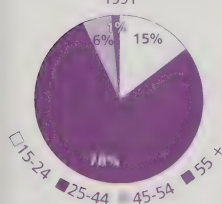
### Percentage of Women

1991



### Age of Workers

1991



**See also:** This Occupation Code: 3222. Related Code: 322.  
Vol. 2 Field of Study Cross-index: U53, U65, C51, T51.  
For further information, see List of Associations.



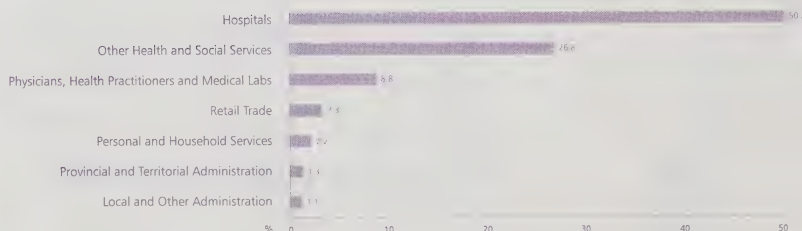
# Other Technical Occupations in Health Care (Except Dental)

## At Work

People in this group work for government, optical retail stores and departments, clinics, health clubs, spas, health food stores, health care institutions, ambulance services, fire departments, mining companies and private individuals. They may also be self-employed.

- Opticians prepare or supervise the preparation of eyeglasses and contact lenses from prescriptions, and fit them on clients.
- Acupuncturists diagnose patients' physical problems and treat them with acupuncture needles and laser and electric stimulation.
- Chinese medical practitioners, herbalists, homeopaths, rolfers and reflexologists employ herbs, finger pressure, manipulation and other natural healing techniques.
- Registered nursing assistants provide nursing care to patients under the direction of doctors and nurses.
- Operating room technicians clean and sterilize operating rooms and instruments.
- Ambulance attendants and paramedics provide emergency medical care and transport patients to medical facilities.
- Audio prosthetists, audiometric, communication and ophthalmic assistants, and physical rehabilitation technicians provide technical support in their area of work.
- Massage therapists do massage therapy.

## Where They Work



## Education, Training and Experience

People in this group usually need a high school diploma and specialized training at college, university or private institutes in their specialty.

- Most must have supervised practical training.
- Many require registration or certification with their professional associations.
- Some need provincial or territorial licences.
- Ambulance attendants, paramedics and emergency vehicle operators require an appropriate drivers licence.

## Full-Time Earnings

1993

\$49,800

\$35,500

\$17,700

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

78,000 people were employed in these occupations in 1994 — a 26% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 68% of these workers are registered nursing assistants, and 15% are ambulance attendants.
- A much greater than average proportion of workers is employed part-time.
- The proportion of self-employed workers is about half the average for all occupations.
- Over 80% of these workers are women, considerably greater than the average for all occupations.
- There are few young workers, reflecting the educational and training requirements in these occupations.
- The unemployment rate is less than half the national average.
- Full-time earnings for this group are slightly below average.
- Employment varies moderately with economic conditions and is not seasonal.

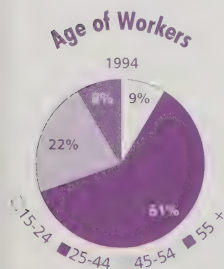
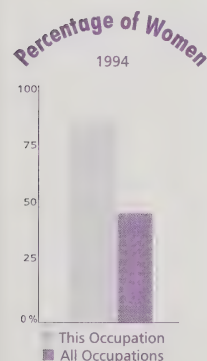
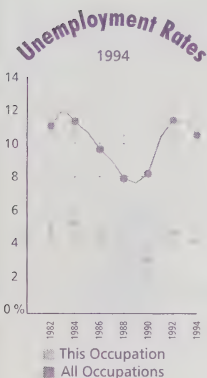
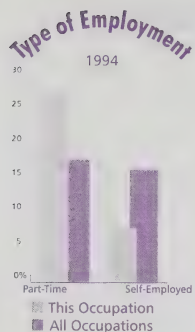
**Current labour market conditions for this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain good through the year 2000.

- Extra billing and the shift from institutional to home care (ambulatory services), as well as the ageing of the Canadian population, will increase the demand for these workers.
- New skills will be required to meet technological breakthroughs in the health field.
- This group is expected to experience declining employment in hospitals and in other health and social services. Job growth should occur in private health care practices.

**See also:** This Occupation Code: 323. Related Code: 3233.  
Vol. 2 Field of Study Cross-index: U56, U58, C56, T53.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

**How will labour market conditions change in this group?**





# Registered Nursing Assistants

## At Work

Registered nursing assistants work in hospitals, nursing homes, extended day-care facilities, rehabilitation centres, doctors' offices, clinics, companies and private homes.

- Registered nursing assistants provide nursing care under the direction of registered nurses, physicians and other health team members. They may distribute medication, take patients' blood pressure, temperature and pulse, bathe and dress patients, and assist registered nurses with procedures such as intravenous therapy, applying sterile compresses and removing sutures.
- Operating room technicians provide nursing care related to surgical procedures. They may prepare patients for surgery, assist at surgical procedures by laying out instruments and passing them to surgeons, and clean and sterilize the operating room and instruments.

This occupation also includes licensed practical nurses.

## Full-Time Earnings

1993

\$40,800

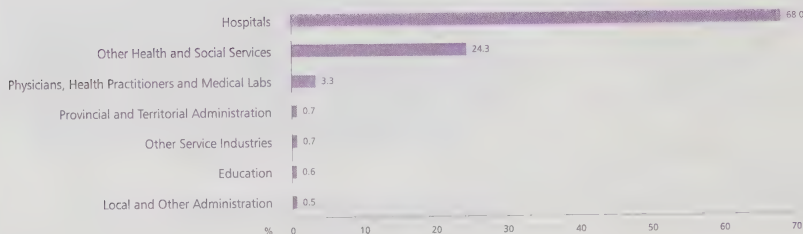
\$29,800

\$17,200

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this occupation must complete a college or other approved program for registered nursing assistants.

- They may require licensing in some provinces. Their titles vary by province. For example, they are certified nursing assistants in Nova Scotia and Saskatchewan, licensed practical nurses in Manitoba and British Columbia, and registered nursing assistants in Newfoundland, New Brunswick, Ontario and Alberta.
- In Quebec, nursing assistants must belong to L'Ordre des infirmières et infirmiers auxiliaires du Québec.
- Operating room technicians require either additional academic training in operating room techniques or on-the-job training.

## About this Occupation

53,000 people were employed in this occupation in 1994 — 4% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- The proportion of part-time workers is well above the average of all occupations.
- Practically all workers in this occupation are women.
- There are few young workers, reflecting educational requirements for this occupation.
- The unemployment rate is less than half the national average.
- Full-time earnings for registered nursing assistants are below average levels.
- Employment is moderately sensitive to changing economic conditions and is not seasonal.

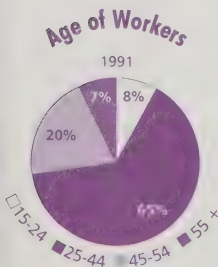
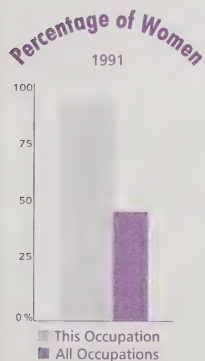
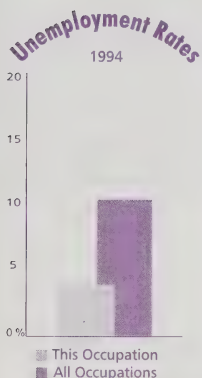
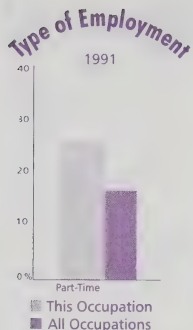
**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

The labour market situation for registered nursing assistants should remain good through the year 2000.

- The nursing assistant's role is expected to change as more and more technology is introduced at the bedside and as provincial governments allow nurses to perform more and more medical acts which up till now have been restricted to physicians.
- The shift from institutional to home care (ambulatory services) and the ageing of the Canadian population will have positive effects on the demand for these workers and will necessitate changes in skill requirements.
- In addition, as governments curtail costs of health delivery, hospitals may be forced to hire nursing assistants instead of registered nurses. On the other hand, the growing complexity of standard nursing care and the increasing severity of illness of hospital patients may lead to the replacement of many nursing assistants with nurses.
- Hospitals and other social and health services are expected to employ fewer from this occupation over the next five years. However, growth should occur in private practices of health care practitioners and in medical laboratories.

**See also:** This Occupation Code: 3233. Related Code: 323.  
Vol. 2 Field of Study Cross-index: U56, C56, C57, T53, T85.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

Getting  
Better

Stable

Getting  
Worse

How will  
labour market  
conditions  
change  
in this  
group?



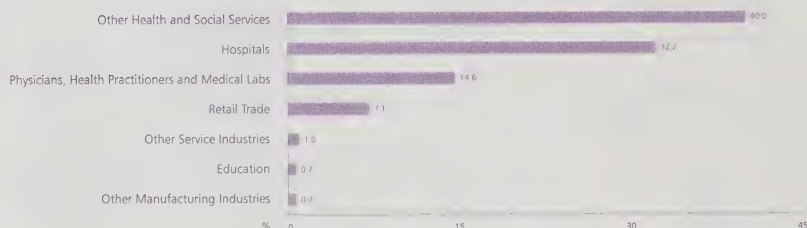
# Assisting Occupations in Support of Health Services

## At Work

People in this group work in government, educational institutions, dentists' offices, commercial dental laboratories, hospitals and other health care institutions, medical pathology laboratories and pharmacies.

- Dental assistants assist dentists during the examination and treatment of patients, and perform some clerical functions.
- Nurse aides and orderlies assist nurses and other health care workers in the basic care of patients, and transport patients in wheelchairs and on stretchers for treatment or surgery.
- Orthopedic technologists apply and adjust casts and splints on patients and assist orthopedic surgeons.
- Pharmacy assistants assist pharmacists in the preparation of prescriptions.
- Morgue attendants lay out instruments, transfer bodies and assist pathologists at autopsies.

## Where They Work



## Education, Training and Experience

People in this group must have some high school or a high school diploma.

- Dental assistants must complete a three-month-to-one-year college dental assistant program, or high school and on-the-job training. Those who perform duties such as taking X-rays and polishing and cleaning teeth require certification.
- Morgue attendants require on-the-job training.
- Nurse aides and orderlies require some secondary school and on-the-job training, or a program in nursing aid or health care at a college or private institute and practical training.
- Orthopedic technologists and pharmacy assistants must complete high school and have on-the-job training or a college program in their field of work.

## Full-Time Earnings

1993

\$45,100

\$32,400

\$17,800

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

154,000 people were employed in these occupations in 1994 — a 28% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 75% work as nurse aides and orderlies.
- The proportion of part-time workers is much greater than average for all occupations.
- There is very little self-employment in these occupations.
- Over 80% of workers in these occupations are women, far above average.
- There are relatively few young workers.
- The unemployment rate in this occupational group is less than half the national average.
- Full-time earnings are somewhat below average levels.
- Employment in this occupational group is moderately sensitive to changing economic conditions and is not seasonal.

**Current labour market conditions for this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain good through the year 2000.

- Rationalization and government cutbacks in the health sector may hurt employment in these occupations. However, a shift to home care may prove favourable for these occupations.
- Job growth in hospitals and other health and social services is expected to be weak over the next five years. In contrast, job growth will occur in the private practices of health care practitioners and in medical laboratories.

## Work Prospects

1995 to 2000

**Getting Better**

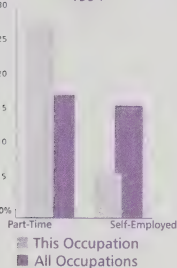
**Stable**

**Getting Worse**

How will labour market conditions change in this group?

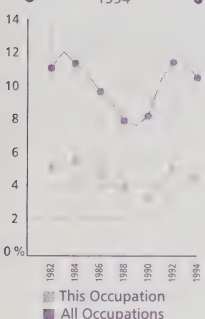
### Type of Employment

1994



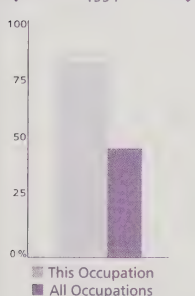
### Unemployment Rates

1994



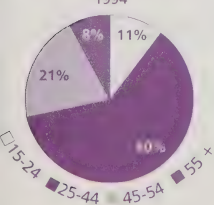
### Percentage of Women

1994



### Age of Workers

1994



See also: This Occupation Code: 341.  
Vol. 2 Field of Study Cross-index: U56, U58, C56, T53.  
For further information, see List of Associations.





# Judges, Lawyers and Quebec Notaries

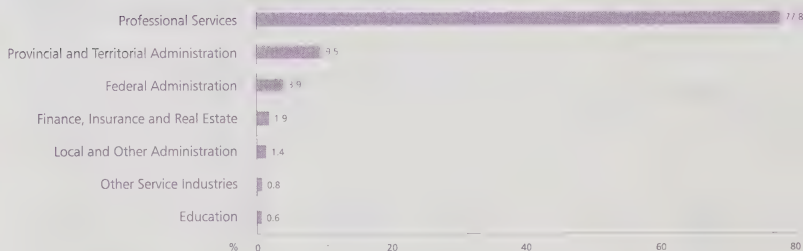
## At Work

Judges are appointed by federal or provincial cabinets. Lawyers and Quebec notaries work in law firms, notary offices, prosecutors' offices, governments and businesses. They may also be self-employed.

- Judges preside over courts of law, interpret and enforce rules of procedure, adjudicate civil and criminal cases and administer justice. They may specialize in particular areas of law such as civil, criminal and family law.
- Lawyers and Quebec notaries provide legal advice and represent clients, prepare contracts, wills and other legal documents, and may act as executors, trustees or guardians in estate and family law matters. They may specialize in specific areas of law such as criminal law (lawyers only) and corporate, real estate and labour law.
- Lawyers also plead cases or conduct prosecutions before courts of law, tribunals and boards, and negotiate civil dispute settlements.

This occupational group also includes articling students.

## Where They Work



## Education, Training and Experience

People in this group require a pre-law college or university program and a bachelor's degree from a law school.

- Judges usually have extensive experience as lawyers or law professors and continuous bar association membership. They must be members in good standing with their provincial or territorial law societies or bar associations.
- Judges appointed to more senior positions in a court usually have experience as judges in that court.
- Lawyers require a period of articling, a bar admission course and exam, and a provincial or territorial licence.
- Quebec notaries must have a one-year course in notarial practice, a notary registration with the Chamber of Notaries and membership in L'Ordre professionnel des notaires du Québec.

## Full-Time Earnings

1993

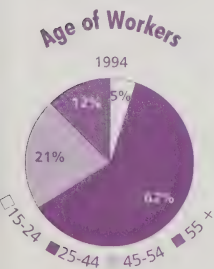
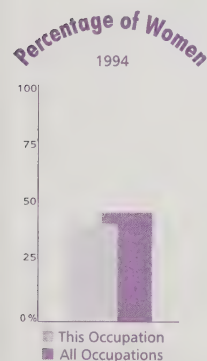
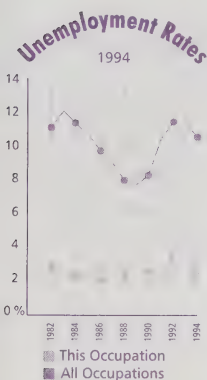
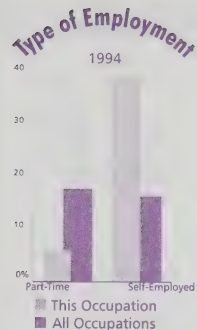
\$122,700

\$65,800

\$20,420

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.



## About these Occupations

70,000 people were employed as judges, lawyers and Quebec notaries in 1994 — a 76% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

- 96% are lawyers.
- 95% work full-time.
- The proportion of self-employed workers is more than double the average of all occupations.
- 40% in these occupations in 1994 were women, following steady growth in the proportion of women since 1984.
- There are very few young workers, reflecting the educational requirements of these occupations.
- The unemployment rate in this occupational group is extremely low.
- Judges, lawyers and Quebec notaries enjoy full-time earnings that are far better than average. Their earnings advantage has increased dramatically since 1984.
- Employment varies moderately with economic conditions and is not seasonal.

**Current labour market conditions for this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupational group are expected to worsen from good to fairly good over the next five years.

- Because of the new Civil Code in Quebec, Quebec's notaries and lawyers will compete more and more in a number of areas.
- Moderate job growth in the area of professional business services is expected to be the source of most new jobs for this group over the next five years. Job growth is also expected in provincial and territorial administration, although employment in this section is relatively small. In contrast, federal government employment will decline.

**See also:** This Occupation Code: 411.  
Vol. 2 Field of Study Cross-index: U81, U83, C111.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

# University Professors and Assistants

## At Work

People in this group work for universities and degree-granting community colleges.

- University professors teach courses to undergraduate and graduate students, conduct lectures, laboratory sessions and discussion groups, participate in university governance and direct and advise on research programs. They specialize in particular subjects such as anatomy, biology, chemistry, physics, geography, history, computer science, sociology, political science and engineering and conduct research in their area of specialization.
- Postsecondary teaching and research assistants organize reference and other materials, conduct literature searches, seminars and laboratory sessions, and perform other activities to assist university professors, community college teachers and other faculty members in teaching and research activities. They usually work in their field of study.

This occupational group also includes university instructors and lecturers, university department heads and post-doctoral fellows.

## Full-Time Earnings

1993

\$78,000

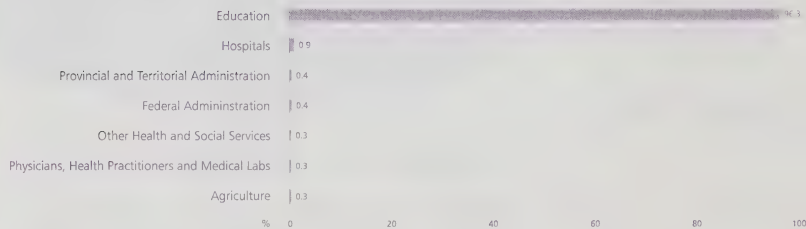
\$49,900

\$15,100

Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work

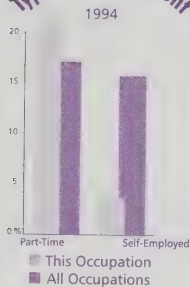


## Education, Training and Experience

People in this group are either in the process of obtaining a college or university degree or have completed a university degree.

- University professors require a doctoral degree in their field of study. They require licences or professional accreditation for teaching in certain regulated fields such as medicine, law, psychology, engineering and architecture.
- Postsecondary teaching and research assistants require enrolment in a college or university.

## Type of Employment

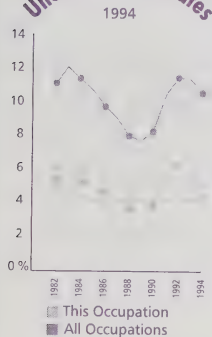


## About these Occupations

92,000 people were employed in these occupations in 1994 — 37% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

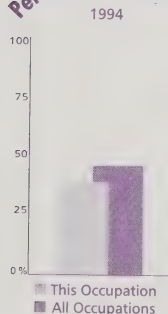
- 57% of these workers teach in universities, while 43% work as postsecondary teaching and research assistants.
- 21% of these workers are employed on a part-time basis, somewhat above the average for all occupations.
- There is virtually no self-employment in these occupations.
- 38% are women, somewhat less than the average for all occupations.
- There are relatively few young workers, reflecting the high, and rising, educational requirements in these occupations.
- The unemployment rate is about half the national average.
- Full-time earnings are substantially higher than average levels and are higher than for almost all other comparable professional occupations.
- Employment in these occupations varies moderately with economic conditions and is not seasonal.

## Unemployment Rates



**Current labour market conditions for university professors and assistants are good despite weakness remaining from the 1991-92 recession.**

## Percentage of Women

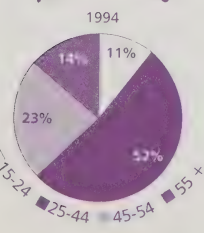


## Looking to the Year 2000

Labour market conditions in this group of occupations are expected to worsen from good to fairly good over the next five years.

- People in these occupations could be affected by public sector decisions to curtail costs and by demographic changes. The development of research in postsecondary institutions may help to stabilize the demand for jobs in these occupations.
- Universities are increasingly hiring part-time and temporary faculty. Competition for available faculty positions is stiff, although the situation varies greatly by specialty, with some specialties actually experiencing difficulties in recruitment.
- This group is expected to experience very slow job growth over the next five years, as demand in the educational sector grows modestly.

## Age of Workers



See also: This Occupation Code: 412.  
Vol. 2 Field of Study Cross-index: M71, U11, U22, U65, U86.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# College and Other Vocational Instructors

## At Work

These instructors work in community and agricultural colleges, technical institutes, language schools, Bible colleges and other vocational schools, private companies and government. They specialize in particular fields of study such as visual arts, dental hygiene, welding and law and security. Their duties may require them to:

- Teach students using lectures, demonstrations, discussion groups, shop sessions and seminars;
- Prepare teaching materials and outlines for courses;
- Prepare, administer and mark tests and papers;
- Advise students on program curricula and career decisions; and
- Serve on faculty committees that deal with matters such as budgets, curriculum revision and course and diploma requirements.

This occupational group also includes cegep teachers, company trainers and government training officers.

## Full-Time Earnings

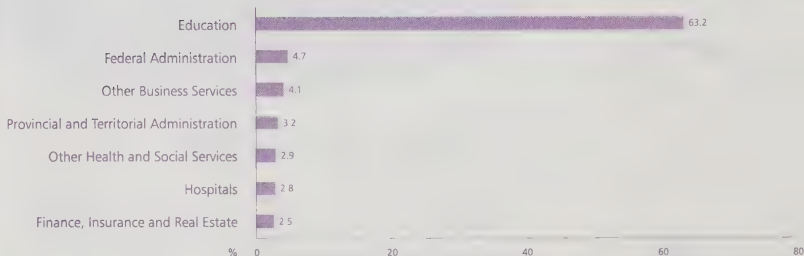
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

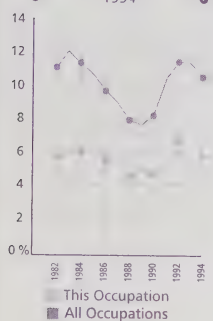
These instructors must have a college diploma or bachelor's degree or demonstrated expertise in their field of instruction.

- They may require a master's degree.
- Trades instructors need trade certification, completion of apprenticeship training and additional courses in teaching.
- With experience, they may progress to administrative positions.

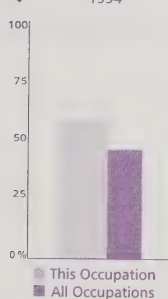
## Type of Employment



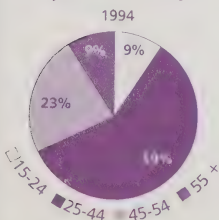
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About this Occupation

91,000 people were employed as college and other vocational instructors in 1994 — 37% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- One in five workers is employed part-time, slightly above the average for all occupations.
- The proportion of self-employment in this occupation is slightly below the average of all occupations.
- 58% of workers are women, above the average for all occupations, and women's share of employment in this occupation has grown over the last decade.
- There are few young workers, reflecting the educational requirements of these jobs.
- The unemployment rate is well below the national average.
- Full-time earnings are above average levels.
- Employment in this occupation is moderately sensitive to business conditions and is highly seasonal.

**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen from good to fairly good over the next five years.

- Technological change is making itself felt in the classroom through the introduction of computers and the use of more sophisticated machinery in technical courses.
- People in this occupation may be affected by public sector decisions to curtail costs. This negative impact is reduced if accessibility to colleges remains high.
- Although job growth is expected to be slow in education, it will remain the largest job generator for this occupation over the next five years. The business service sector is expected to be a strong source of employment growth.

See also: This Occupation Code: 413.  
Vol. 2 Field of Study Cross-index: U11, U21, U22, U86, C21.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Secondary and Elementary School Teachers and Counsellors

## At Work

People in this group work for public and private elementary and high schools and school boards.

- High school teachers prepare and teach academic, technical, vocational and specialized subjects. They may specialize in mathematics, science, computer science, history and other subjects.
- Elementary school teachers teach basic subjects such as reading, writing, arithmetic, social studies, physical education, music, art and other subjects. They may specialize in areas such as special education and second language instruction.
- Kindergarten teachers teach subjects such as reading readiness and number work and introduce students to music, art and literature. They also organize and conduct games and other activities to promote their students' physical, mental and social development.
- School and guidance counsellors advise students on educational issues, career planning and personal development, and co-ordinate the provision of counselling services to students, parents and teachers. They also administer and interpret standardized intelligence, aptitude and interest tests, and may teach regular classes.

This occupational group also includes department heads, school librarians and supply teachers.

## Full-Time Earnings

1993

\$59,200

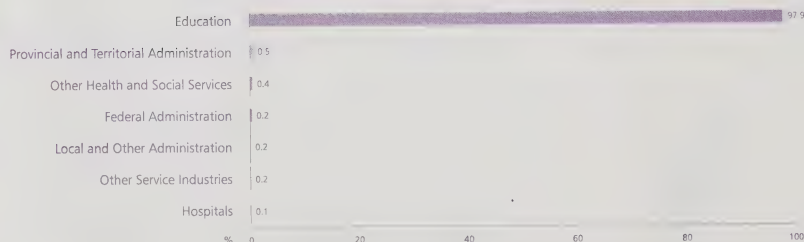
\$41,200

\$27,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group require a bachelor's degree in education.

- They require provincial teaching certificates.
- Special education teachers and second language instructors need additional training.

## About these Occupations

385,000 people were employed as secondary and elementary school teachers and counsellors in 1994 — 32% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 56% are elementary and kindergarten teachers, and 41% are secondary school teachers.
- A slightly below average proportion of workers is employed part-time.
- There is very little self-employment in these occupations.
- Two thirds of these teachers and counsellors are women, well above the average for all occupations.
- There are very few young workers in these occupations, reflecting educational requirements for these jobs.
- The unemployment rate in these occupations is less than half of the national average.
- Full-time earnings are well above average levels.
- Employment in these occupations varies moderately with overall business conditions but is not seasonal.

**Labour market conditions for secondary and elementary school teachers and counsellors are good despite weakness remaining from the 1991-92 recession.**

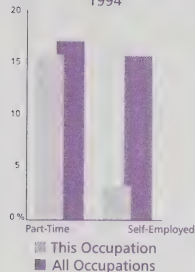
## Looking to the Year 2000

Labour market conditions in this occupational group are expected to worsen from good to fairly good over the next five years.

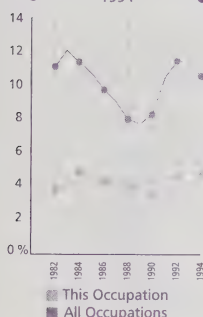
- Recently, there appears to be a shortage of teachers in isolated areas, although this may be reduced by surpluses in urban centres.
- Part-time work is expected to be a major source of employment growth. It takes many forms, such as supply teaching, work sharing and specialty teaching.
- No employment growth is expected in the education sector over the next five years.

See also: This Occupation Code: 414. Related Codes: 4141, 4142, 4143.  
Vol. 2 Field of Study Cross-index: U21, U22, U24, U86, C21.  
For further information, see List of Associations.

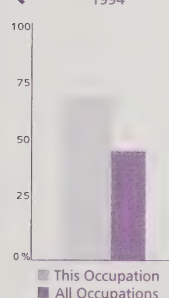
Type of Employment



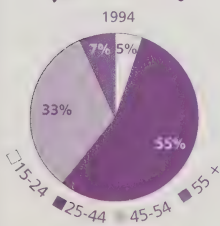
Unemployment Rates



Percentage of Women



Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Secondary School Teachers

## At Work

These teachers work in private and public secondary schools. Their duties may require them to:

- Prepare and present subject material to students according to an approved curriculum;
- Teach students using a systematic plan of lectures, discussions, audio-visual presentations, and laboratory, shop and field studies;
- Assign and correct homework;
- Prepare, administer and correct tests;
- Evaluate progress of students and discuss results with students, parents and school officials;
- Participate in staff meetings, educational conferences and teacher training workshops; and
- Advise students on course selection and on vocational and personal matters.

This occupation also includes teachers who are school department heads, school librarians, special education teachers and vocational teachers.

## Full-Time Earnings

1993

\$61,200

\$45,600

\$29,900

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Teachers must have a bachelor's degree in education and a provincial teaching certificate.

- Teachers of academic subjects often must have a bachelor's degree in the arts or sciences before obtaining their degree in education.
- Teachers of vocational and technical subjects usually must have several years' training or experience in their field before obtaining their bachelor's of education.
- School department heads require several years' teaching experience.
- With additional training, teachers may specialize in special education or English or French as a second language.
- With experience, they may progress to vice-principal or other administrative positions in the educational system.

## About this Occupation

156,000 workers were employed as secondary school teachers in 1994 — a 21% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- The proportion of part-time workers in this occupation is at the average level for all occupations.
- The proportion of women in this occupation is at the average level for all occupations.
- There are very few young workers, reflecting educational requirements.
- The unemployment rate is about half the national average.
- Full-time earnings for this occupation are significantly higher than average levels.
- Employment in this occupation varies moderately with economic conditions and is not seasonal.

**Current labour market conditions for secondary school teachers are good despite weakness remaining from the 1991-92 recession.**

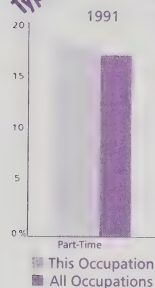
## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen from good to fairly good over the next five years.

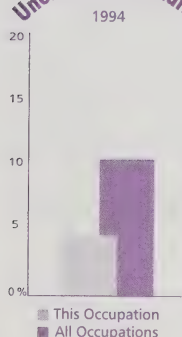
- Part-time work is expected to be a major source of employment growth over the next five years. Technological change may improve teaching methods but have little impact on employment levels.
- Employment is concentrated in education. A slight decline is expected over the next five years in the number of secondary school teachers required.

See also: This Occupation Code: 4141. Related Code: 414.  
Vol. 2 Field of Study Cross-index: M21, M22, U22, U23, U24.  
For further information, see List of Associations.

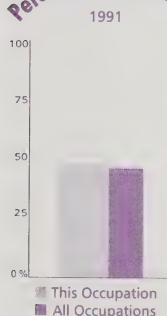
### Type of Employment



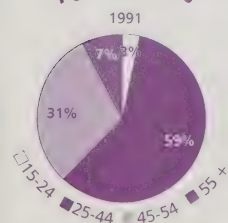
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Elementary and Kindergarten Teachers

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

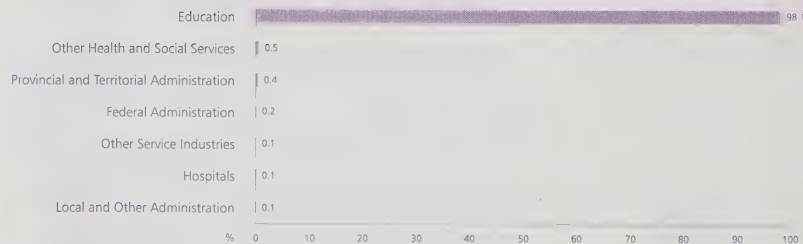
## At Work

People in this group work in private and public elementary schools. Their duties may require them to:

- Prepare and present courses to students according to an approved curriculum;
- Teach students using a systematic plan of lessons, discussions, audio-visual presentations and field trips;
- Lead students in activities to promote their physical, mental and social development and their school readiness;
- Assign and correct homework;
- Prepare, administer and correct tests;
- Evaluate progress of students and discuss results with students, parents and school officials; and
- Participate in staff meetings, educational conferences and teacher training workshops.

This occupation also includes elementary school librarians and special education teachers.

## Where They Work



## Education, Training and Experience

People in this occupation require a bachelor's degree in education and a provincial teaching certificate.

- They need additional training to specialize in special education or second language instruction.
- They need an additional certificate to teach English or French as a second language.
- With experience, they may progress to positions such as education consultant or school principal.

## About this Occupation

216,000 people were employed as elementary and kindergarten school teachers in 1994 — a 31% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- The proportion of these teachers working part-time is somewhat higher than the average for all occupations.
- 82% of elementary and kindergarten school teachers are women, much higher than the national average.
- There are very few young workers, reflecting the educational requirements of this occupation.
- The unemployment rate of elementary and kindergarten school teachers is about half the national average.
- Full-time earnings for this occupation are significantly higher than average levels.
- Employment of these teachers is moderately sensitive to economic conditions but is not seasonal.

**Current labour market conditions for elementary and kindergarten school teachers are good despite weakness remaining from the 1991-92 recession.**

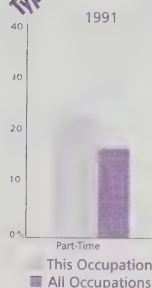
## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen from good to fairly good over the next five years.

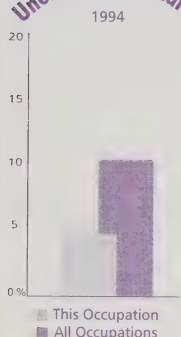
- Part-time work is expected to be a major source of employment growth. Technological change may improve teaching methods but have little impact on employment levels.
- Employment is expected to grow slowly for elementary and kindergarten teachers in education over the next five years.

See also: This Occupation Code: 4142. Related Code: 414.  
Vol. 2 Field of Study Cross-index: U22, U24, U44, U86, C21.  
For further information, see List of Associations.

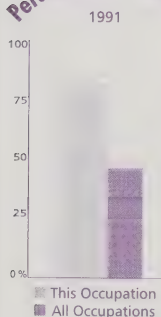
### Type of Employment



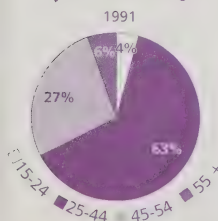
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



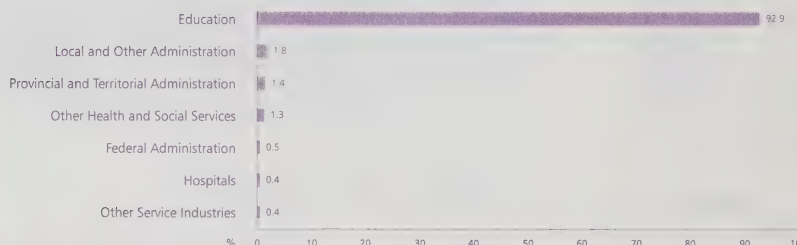
# School and Guidance Counsellors

## At Work

These counsellors work for school boards and in elementary and high schools. Their duties may require them to:

- Counsel students on course selection, school adjustment, truancy, study habits and career planning;
- Counsel students on personal and social issues such as substance abuse, depression, sexuality, self-esteem and family problems;
- Consult with teachers, parents, school administrators and community agencies;
- Co-ordinate the provision of counselling and information services such as career information services and professional development sessions for students, parents and teachers; and
- Administer and interpret standardized intelligence, aptitude and interest tests.

## Where They Work



## Education, Training and Experience

These counsellors require a bachelor's degree in education and a teacher's certificate in the province where they work.

- They usually require graduate courses in counselling.
- They usually require some teaching experience.
- In Quebec, they must be members of L'Ordre professionnel des conseillers et conseillères d'orientation du Québec.

## Full-Time Earnings

1993

\$60,310

\$45,800

\$27,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

12,000 people were employed as school and guidance counsellors in 1994 — a 55% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- The proportion of these counsellors working part-time is below the average for all occupations.
- Six out of 10 school counsellors are women, substantially greater than the average for all occupations.
- There are very few young workers, reflecting the educational requirements of these jobs.
- The unemployment rate is significantly less than the national average.
- Full-time earnings for this occupation are significantly higher than average levels.
- Employment in this occupation varies moderately with business conditions and is not seasonal.

**Current labour market conditions for school and guidance counsellors are good despite weakness remaining from the 1991-92 recession.**

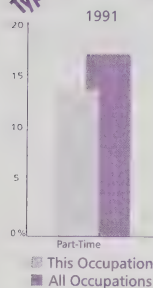
## Looking to the Year 2000

Labour market conditions for this occupation are expected to worsen from good to fairly good over the next five years.

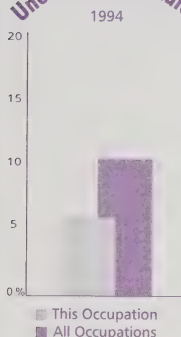
- Part-time work and school sharing is expected to be a major source of employment growth over the next five years.
- School and guidance counsellors are expected to experience moderate job growth within the education sector over the next five years, faring relatively better than other occupations in education.

**See also:** This Occupation Code: 4143. Related Code: 414  
Vol. 2 Field of Study Cross-index: M21, U22, U86, U89, C84.  
For further information, see List of Associations.

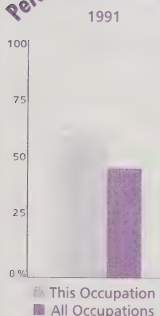
### Type of Employment



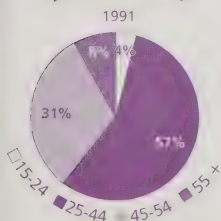
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

# Psychologists, Social Workers, Counsellors, Clergy and Probation Officers

## Full-Time Earnings

1993

\$54,400

\$34,900

\$16,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

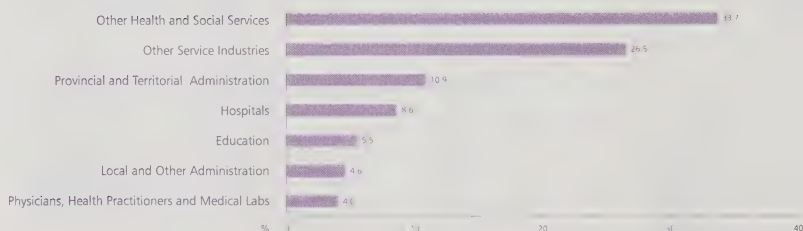
## At Work

People in this group work for government, clinics, correctional facilities, health care institutions, social service agencies, welfare organizations, school boards, schools, universities, churches, synagogues, temples and other places of worship. They may work in private practice.

- Psychologists diagnose psychological and emotional disorders, counsel clients, provide therapy and conduct research.
- Social workers provide counselling and therapy and referrals to other supportive social services.
- Counsellors assist individual clients and groups to overcome personal problems and achieve personal goals.
- Ministers of religion conduct religious services and provide spiritual and moral guidance.
- Parole officers monitor criminal offenders released from prison to serve the remainder of their sentences in the community.

This occupational group also includes probation officers and classification officers in correctional institutions.

## Where They Work



## Education, Training and Experience

People in this group usually require a bachelor's degree in the area of work. Some require a master's or doctoral degree in a specific or related discipline.

- They usually need supervised practical experience.
- Some must complete provincial exams and have provincial certificates and membership in their professional associations.

## About these Occupations

84,000 people were employed as psychologists and social workers in 1994 — 44% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 36% of these workers are social workers, 28% are ministers of religion, 21% are family marriage counsellors, and 12% are psychologists.
- The proportion working part-time in this occupational group is slightly below average.
- The proportion of self-employed workers is less than half the national average.
- Women make up over half the workers in these occupations, slightly above the average for all occupations.
- There are few young workers, reflecting the educational requirements of these jobs.
- The unemployment rate in this occupational group is about half the national average.
- Full-time earnings are very slightly above average levels, much lower than in other comparable groups of professionals.
- Employment in these occupations varies moderately with economic conditions and is not seasonal.

**Current labour market conditions in this occupational group are good.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to worsen from good to fairly good over the next five years.

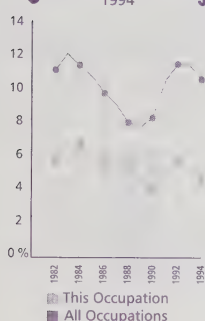
- Growth may be subdued in some areas as current provincial expenditures in health services are under review.
- Most employment growth is expected in health and social services as well as in hospitals, education and private practices of health care practitioners. Less employment growth is expected in provincial and territorial administration and some service industries.

**See also:** This Occupation Code: 415. Related Codes: 4151, 4152, 4153. Vol. 2 Field of Study Cross-index: U86, U88, U89, U4411, C84. **For further information, see List of Associations.**

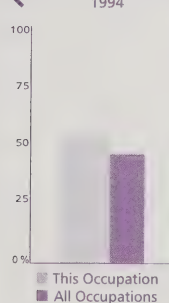
### Type of Employment



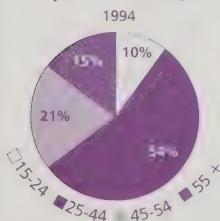
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Psychologists

## At Work

Psychologists work in clinics, correctional facilities, hospitals, rehabilitation centres, schools and universities. They may also be self-employed.

- They diagnose psychological and emotional disorders, help clients manage physical illness and disorder, counsel clients, provide therapy, and research and apply theory relating to behaviour and mental processes.
- They work with psychological theory and principles regarding behaviour and mental processes such as learning, memory, perception and language development.
- They may specialize in clinical psychology, school psychology, industrial/organizational work or experimental research.
- They may also specialize in specific areas such as behavioural psychology, child psychology, clinical neuropsychology, health psychology, educational psychology, industrial psychology and sports psychology.

## Full-Time Earnings

1993

\$72,500

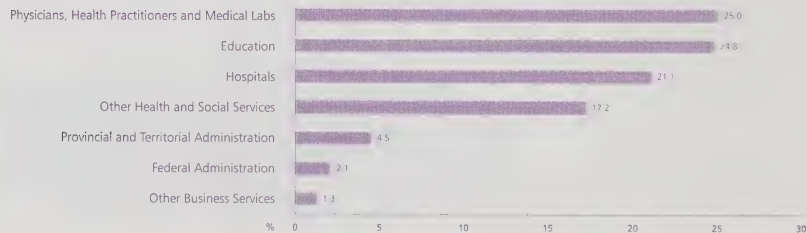
\$50,800

\$23,900

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Psychologists must have a postgraduate university degree in psychology and a provincial certificate of registration in all provinces and the Northwest Territories.

- They must have a doctoral degree in Prince Edward Island, Nova Scotia, Ontario, Manitoba, Saskatchewan and British Columbia.
- They must have a master's degree in Newfoundland, New Brunswick, Quebec, Alberta and the Northwest Territories.
- They usually must complete a period of supervised practical experience.
- They usually must complete a provincial written and/or oral examination.
- In Quebec, they must be members of L'Ordre professionnel des psychologues du Québec.
- In some provinces, with additional training and experience, they may become specialized in a particular area.

## About this Occupation

10,000 people were employed as psychologists in 1994 — more than double the number in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- The proportion of psychologists working part-time is at the average level for all occupations.
- Close to 60% of psychologists are women, more than the average for all occupations, but less than for social workers and for family counsellors.
- There are very few young workers, reflecting the educational and training requirements for psychologists.
- Unemployment rates for psychologists are extremely low.
- Full-time earnings for this occupation are higher than average levels.
- Employment in this occupation varies moderately with economic conditions and is not seasonal.

**Current labour market conditions for psychologists are very good.**

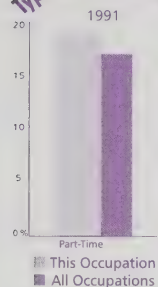
## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen from very good to good over the next five years.

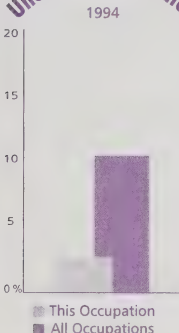
- Growth will be subdued in some areas as current provincial expenditures in health services are being reviewed. The outlook may be more positive for psychologists with a clinical specialization and for those willing to work in correctional centers.
- Private practice and education are expected to be the mainstays of employment growth for psychologists over the next five years.

**See also:** This Occupation Code: 4151. Related Code: 415. Vol. 2 Field of Study Cross-index: M86, U24, U58, U86. For further information, see List of Associations.

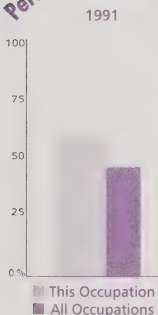
Type of Employment



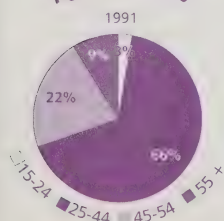
Unemployment Rates



Percentage of Women



Age of Workers



Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

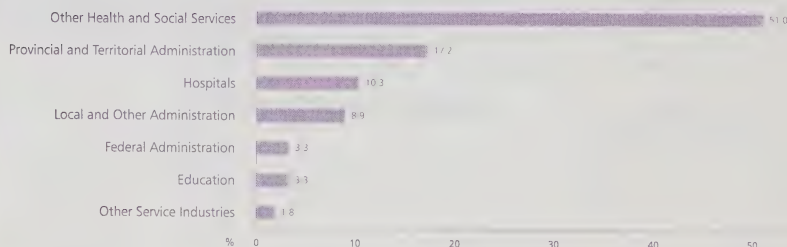
# Social Workers

## At Work

Social workers work alone or in teams in hospitals, school boards, social service agencies, welfare organizations and correctional facilities. They may also work in private practice. Their duties may require them to:

- Interview clients individually, in families or in groups to assess their situation and problems and determine the types of services they require;
- Provide counsel and therapy to assist clients in developing skills to deal with and resolve their social and personal problems;
- Plan programs of assistance for clients including referrals to agencies that provide financial help, legal aid, housing, medical treatment and other services;
- Investigate cases of child abuse or neglect and take authorized protective action when necessary;
- Act on behalf of client groups in the community and lobby for solutions to social problems; and
- Develop and advise on social policy, conduct social research and assist in community development.

## Where They Work



## Education, Training and Experience

Social workers must have a bachelor's degree in social work and usually require some supervised practical experience.

- In Alberta, they require a master's degree in social work.
- They usually must complete a provincial written and/or oral examination.
- They usually must have membership in a provincial association of social workers.
- Social workers in Newfoundland, Prince Edward Island, New Brunswick, Quebec and Saskatchewan must have a provincial certificate of registration.
- In Quebec, they must be members of L'Ordre professionnel des travailleurs sociaux du Québec.

## Full-Time Earnings

1993

\$53,200

\$38,000

\$21,800

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

30,000 people were employed as social workers in 1994 — almost double the number in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- A slightly below average proportion of social workers is employed part-time.
- Three of four social workers are women, well above the average for all occupations.
- There are few young workers, reflecting the educational requirements of this occupation.
- The unemployment rate is significantly lower than the national average.
- Full-time earnings for this occupation are higher than average levels.
- Employment in this occupation varies moderately with economic conditions and is not seasonal.

**Current labour market conditions for social workers are good.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen over the next five years and become fairly good.

- Hospitals, federal and municipal governments and the education system account for a large proportion of employment for social workers. The demand for these workers will be adversely affected by curtailed provincial and federal expenditures on health and social programs.
- Health and social services, hospitals and local administration are expected to be the main source of job creation over the next five years, as the number of social workers employed by provincial administrations falls.

## Work Prospects

1995 to 2000

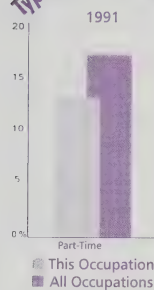
Getting Better

Stable

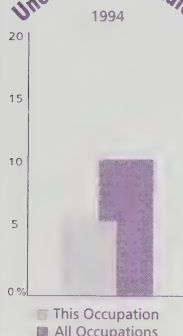
Getting Worse

How will labour market conditions change in this group?

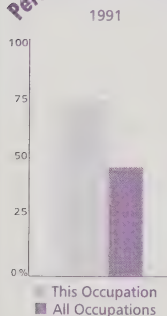
### Type of Employment



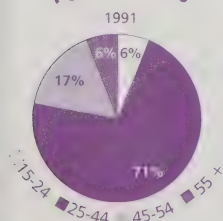
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 4152. Related Code: 415.  
Vol. 2 Field of Study Cross-index: M88, U86, U88, U89, C84.  
For further information, see List of Associations.





# Family, Marriage and Other Related Counsellors

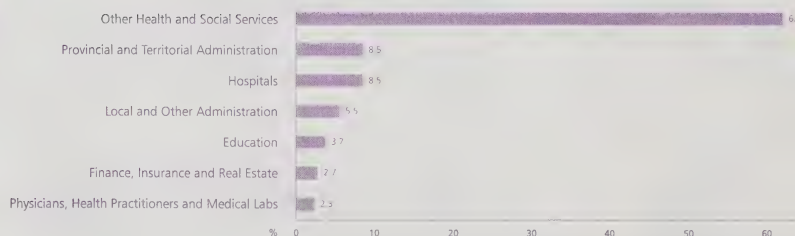
## At Work

These counsellors work for social service agencies and hospitals or in private practice. Their duties may require them to:

- Interview clients, prepare case histories and assess problems;
- Develop and implement counselling and intervention programs to assist clients in determining goals;
- Counsel clients and provide therapy;
- Evaluate the effectiveness of counselling programs and clients' progress;
- Provide public education and consultation to other professionals or groups regarding counselling services, issues and methods; and
- Specialize in dealing with a specific client group such as injured workers, or with specific problems such as drug and alcohol addiction, marital difficulties and behavioural disorders.

This occupation also includes addictions counsellors, bereavement counsellors, sex therapists, rehabilitation counsellors and youth counsellors.

## Where They Work



## Education, Training and Experience

These counsellors require a master's degree in counselling.

- They usually become specialized in a particular area through training and experience.
- With additional training and experience, they may progress to positions in social service management.

## Full-Time Earnings

1993

\$49,100

\$33,600

\$18,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

17,000 people were employed as family and marriage counsellors in 1994 — almost double the number in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- The proportion of these counsellors employed part-time is at the average of all occupations.
- 70% of these counsellors are women, significantly greater than average.
- There are relatively few young workers, reflecting schooling requirements for these jobs.
- The unemployment rate is lower than the national average.
- Full-time earnings for this occupation are slightly below average levels.
- Employment in this occupation varies moderately with business conditions and is not seasonal.

**Current labour market conditions for family and marriage counsellors are good.**

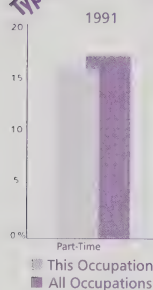
## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen from good to fairly good over the next five years.

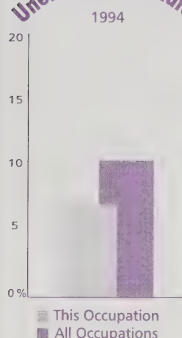
- Government restraints in the area of social programs and health services will be an important factor limiting the growth of employment in this occupation.
- Other health and social services are expected to continue to be the leading employer of family and marriage counsellors over the next five years. Employment in provincial and territorial administration is expected to decline.

**See also:** This Occupation Code: 4153. Related Code: 415.  
Vol. 2 Field of Study Cross-index: U86, U88, U89, C21, C84.  
For further information, see List of Associations.

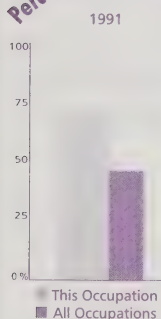
### Type of Employment



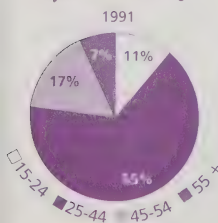
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



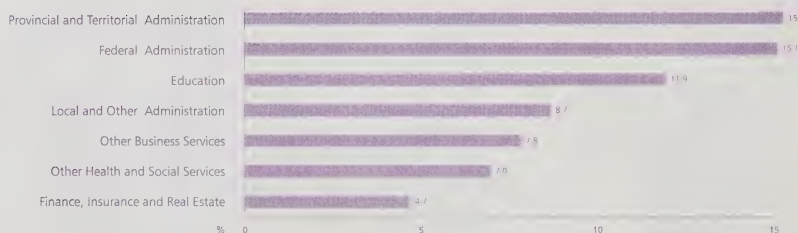
# Policy and Program Officers, Researchers and Consultants

## At Work

These professionals work for government, educational and research institutions, business, professional and recreational organizations, advisory, consulting and marketing firms, non-government agencies and other organizations.

- Professionals in natural and applied science, social, health, education, economic development and marketing areas conduct research, develop policies, provide advice and implement or administer various programs related to their field of work.
- Economists and economic policy researchers and analysts conduct research and develop models to provide for economic forecasting.
- Recreation and sports program supervisors and consultants oversee and administer programs and activities, provide consulting services and develop policies.
- Program officers in government administer and operate programs associated with institutions such as Parliament and activities such as international relations and elections.
- Social science professionals such as anthropologists, geographers, historians, political scientists, sociologists, linguists and archaeologists study, analyze and conduct research in their respective fields.
- Psychometricians administer and interpret psychological tests.

## Where They Work



## Education, Training and Experience

People in this group usually require a college program or bachelor's degree in their field of work.

- Some may require a master's or doctoral degree in their field of work.
- They may require several years' experience in their field of work.
- Foreign service officers must take competitive examinations.
- Recreation and sports program supervisors and consultants may require certificates in areas such as fitness and lifesaving.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

96,000 people were employed as policy and program officers in 1994 — 40% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

- A below average proportion of these workers is employed part-time.
- 30% of these workers are health and social policy researchers, and 26% are economic development officers.
- Self-employment in these occupations is below the average of all occupations.
- About half of all policy and program officers are women, somewhat above the average of all occupations.
- There are relatively few young workers, reflecting the educational requirements of these occupations.
- The unemployment rate is significantly lower than the national average.
- Full-time earnings are above average levels.
- Employment in these occupations varies moderately with economic conditions and is not seasonal.

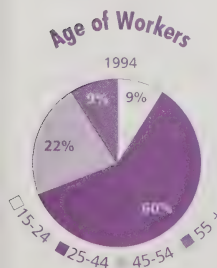
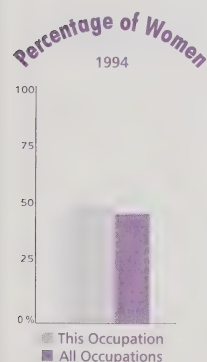
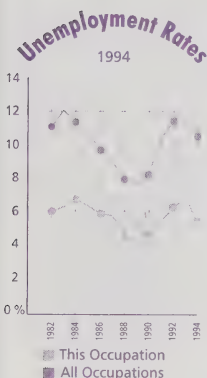
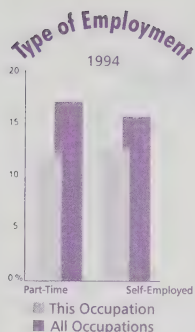
**Current labour market conditions for policy and program officers are good.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to worsen somewhat over the next five years but remain good.

- Government cutbacks may slow employment growth or decrease employment levels in these occupations.
- Provincial administration, the education industry and other business services are expected to provide most of the job growth for this occupation.

See also: This Occupation Code: 416. Related Codes: 4160, 4161, 4163, 4166. Vol. 2 Field of Study Cross-index: M86, U11, U22, U86, U88. For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Health and Social Policy Researchers, Consultants and Program Officers

## Full-Time Earnings

1993

\$57,400

\$39,500

\$22,000

Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

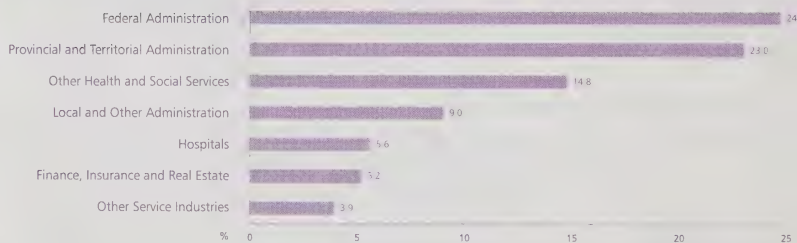
## At Work

People in this group work in government departments and agencies, consulting firms, professional associations and non-governmental organizations.

- Social policy researchers develop social programs, legislation and proposals based on demographic, social and economic analyses.
- Home economists conduct research and advise consumers on food products, textiles and other consumer goods.
- Social survey researchers develop questionnaires, conduct surveys, analyze data and interpret statistics on social issues.
- Health policy researchers, consultants and program officers conduct research, produce reports and administer health care policies and programs.

This occupational group also includes housing policy analysts and international aid and development project officers.

## Where They Work



## Education, Training and Experience

People in this group usually require, at minimum, a bachelor's degree or college diploma.

- People in these social policy occupations usually require a bachelor's degree or college diploma in social science or business administration. They may also need a master's degree in social science or business administration.
- People in these health policy occupations must have a bachelor's degree or college diploma in health science, public administration or hospital administration, or a bachelor's degree in social science. They may also need to complete a graduate degree and usually require several years' experience as health care professionals or community or social services workers.

## About this Occupation

29,000 people were employed as health and social policy researchers in 1994 — a 36% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- The proportion of health and social policy researchers employed part-time is well below the average for all occupations.
- 56% of these researchers are women, well above average.
- There are few young workers, reflecting the educational requirement of these jobs.
- The unemployment rate is about half the national average.
- Full-time earnings for this group of workers are significantly higher than average levels.
- Employment of these researchers varies moderately with economic conditions and is not seasonal.

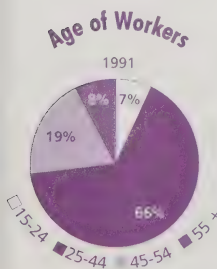
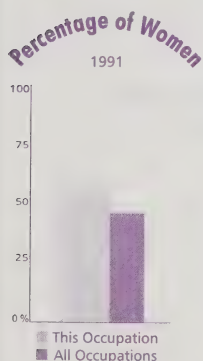
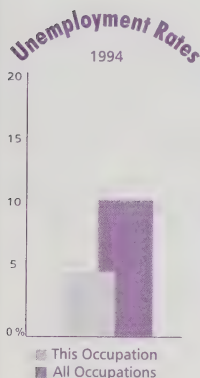
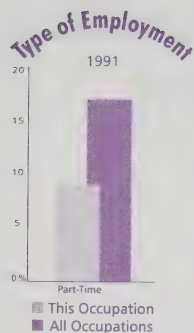
**Current labour market conditions for health and social policy researchers are good.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen somewhat over the next five years but remain good.

- Health and social policy reforms at the federal and provincial levels could boost employment opportunities, but government funding cutbacks will have the opposite effect.
- Health and policy researchers are expected to have better job opportunities in provincial and local administration and in other health and social services, over the next five years, as employment at the federal level declines.

**See also:** This Occupation Code: 4160. Related Code: 416.  
Vol. 2 Field of Study Cross-index: M11, U11, U86, U89, C84.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Natural and Applied Science Policy Researchers, Consultants and Program Officers

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\* Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

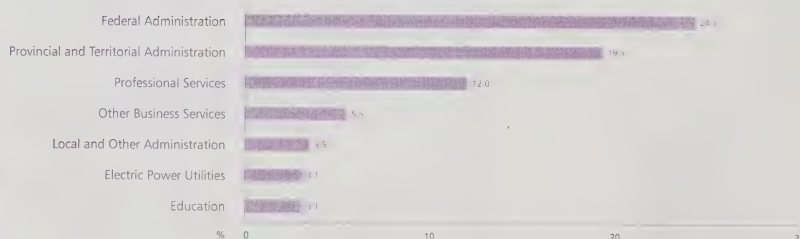
## At Work

People in this group work for federal, provincial and municipal governments, private companies and advisory and consultant agencies. They may also be self-employed.

- Ergonomists conduct research and advise on interrelationships between persons, equipment and working or living environments to ensure products and work methods maximize safety, productivity and comfort.
- Occupational hygienists study physical and chemical hazards and stresses in the workplace. They suggest changes to work processes and provide information to workers on ways to reduce risk to specific occupational hazards.
- Science policy and program officers research and advise on policies and develop and administer programs related to transportation, communications, natural resources, agriculture, the environment, energy, land use and other scientific fields.

This occupation also includes fisheries analysts, industrial hygienists, scientific consultants, patent agents and transportation safety and transport program analysts.

## Where They Work



## Education, Training and Experience

People in this group usually must have a bachelor's degree or college diploma in a related scientific or technical discipline.

- They may require a master's degree in a related scientific discipline.
- Occupational hygienists may require certification by the Canadian Registration Board of Occupational Hygienists or, in Quebec, le Conseil d'accréditation en hygiène industrielle du Québec.
- With experience, people in this group may progress to managerial positions.

## About this Occupation

9,000 people were employed in this occupation in 1994, an increase of 37% since 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 93% work full-time.
- The proportion of women in this occupation is about two thirds the average for all occupations.
- There are relatively few young workers which reflects the education and work experience these jobs require.
- The unemployment rate is about half the average for all occupations.
- Full-time earnings are above average.
- Employment in this occupation is moderately affected by economic conditions and is not seasonal.

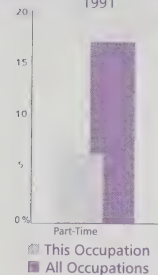
**Current labour market conditions in this occupation are good.**

## Looking to the Year 2000

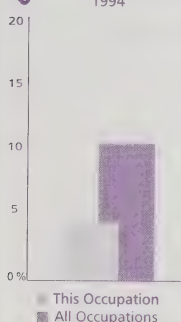
Labour market conditions in this occupation are expected to worsen over the next five years but remain good.

- Employment requirements for this occupation are expected to decline in federal administration through to the year 2000, and achieve only slow growth in provincial administration.
- However, strong employment growth is expected to occur in professional and other business services, resulting in moderate overall job growth for this occupation.

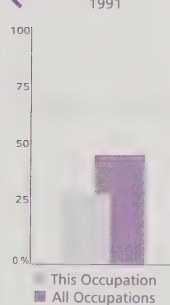
Type of Employment



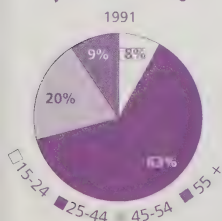
Unemployment Rates



Percentage of Women



Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 4161. Related Code: 416.  
Vol. 2 Field of Study Cross-index: M11, U11, U36, U64, U74.  
For further information, see List of Associations.



# Economic Development Officers and Marketing Researchers and Consultants

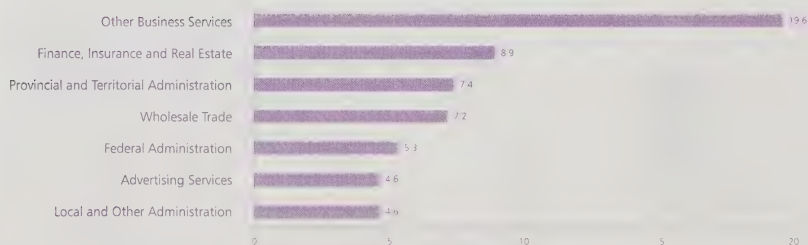
## At Work

People in this occupation work for government agencies, marketing firms and business associations. They may also be self-employed. Their duties may require them to:

- Develop policies and administer programs to promote business investment in urban and rural areas;
- Conduct social and economic surveys to assess development potential and future trends;
- Respond to questions from members of the business community concerning development opportunities;
- Review development proposals and provide advice on procedures and requirements for government approval;
- Conduct surveys and analyze data on the buying habits and preferences of consumers;
- Conduct research on marketing for industrial and commercial products; and
- Develop social and economic profiles of urban and rural areas to encourage investment.

This occupation also includes business, industrial, tourism and regional development officers, and tourism industry consultants.

## Where They Work



## Education, Training and Experience

People in this occupation require a bachelor's degree in economics, commerce, business administration or public administration.

- With experience, they may progress to managerial positions.

## Full-Time Earnings

1993

\$64,100

\$41,400

\$19,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

25,000 people were employed in this occupation in 1994 — 57% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

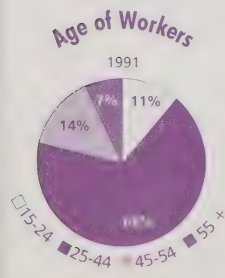
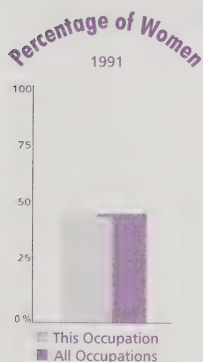
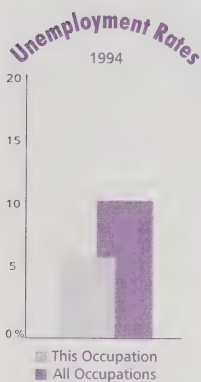
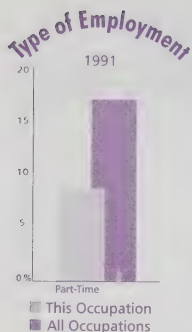
- 91% in this occupation work full-time.
- The proportion of women working in this occupation is slightly below the average of all occupations.
- There are relatively few young workers, reflecting the educational requirements and experience needed for this occupation.
- The unemployment rate for this occupation is well below the national rate.
- Full-time earnings for these workers are significantly higher than average levels.
- Employment in this occupation varies moderately with economic conditions but is not seasonal.

**Current labour market conditions in this occupation are good.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen over the next five years but remain good.

- Free trade and the increasing use of information technology are expected to affect this occupation, as will government restraint and restructuring in the financial sector.
- Advertising services, wholesale trade, finance and other business services are expected to lead job growth for this occupation. Employment in federal administration is expected to decline.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

**See also:** This Occupation Code: 4163. Related Code: 416.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U86, C14.  
For further information, see List of Associations.



# Education Policy Researchers, Consultants and Program Officers

## At Work

People in this occupation work in government departments, school boards and education research institutes. They may also be self-employed. Their duties may require them to:

- Conduct research, produce reports and administer education policies and programs;
- Evaluate curriculum programs and recommend improvements;
- Develop the structure, content and objectives of new programs;
- Conduct statistical analyses to determine cost and effectiveness of education policies and programs;
- Provide ongoing professional development training and consultative services to teachers; and
- Develop teaching materials and other resources for program delivery.

This occupation also includes curriculum developers and planners, and education and special education co-ordinators.

## Where They Work



## Education, Training and Experience

People in this occupation must have a bachelor's degree in education or in a discipline such as social science or business administration.

- They may require a master's degree in education.
- They usually need several years' experience as school teachers.
- They usually require a teacher's certificate in their province of employment.
- With experience, they may progress to managerial positions.

## Full-Time Earnings

1993

\$10,900

\$42,800

\$22,900

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

13,000 people were employed as education policy researchers in 1994 — 43% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- A below average number of education policy researchers are employed part-time.
- Close to 60% of education policy researchers are women, well above the average for all occupations.
- There are very few young workers, reflecting the educational requirements and experience needed in this occupation.
- The unemployment rate for education policy researchers is substantially lower than the national rate.
- Full-time earnings for these workers are significantly higher than the average.
- Employment in this occupation varies moderately with economic conditions and shows some seasonal variability.

**Current labour market conditions for education policy researchers are very good.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen over the next five years but remain very good.

- Budgetary restraint by all levels of government will adversely affect employment opportunities in this occupation.
- Most employment will continue to be centred in education and provincial administration, although growth will be slow.

## Work Prospects

1995 to 2000

Getting Better

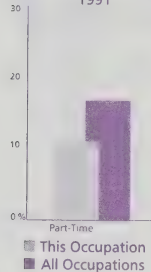
Stable

Getting Worse

How will labour market conditions change in this group?

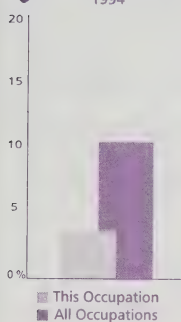
### Type of Employment

1991



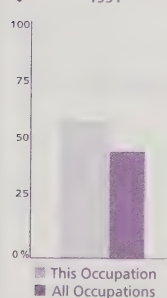
### Unemployment Rates

1994



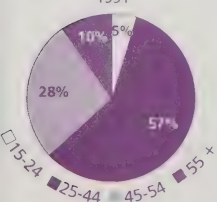
### Percentage of Women

1991



### Age of Workers

1991



**See also:** This Occupation Code: 4166. Related Code: 416. Vol. 2 Field of Study Cross-index: M21, M22, U11, U22, U86. For further information, see List of Associations.



# Paralegal, Social Services Workers and Occupations in Education and Religion

## Full-Time Earnings

1993

\$57,800

\$38,300

\$17,300

## Highest, Average and Lowest\*

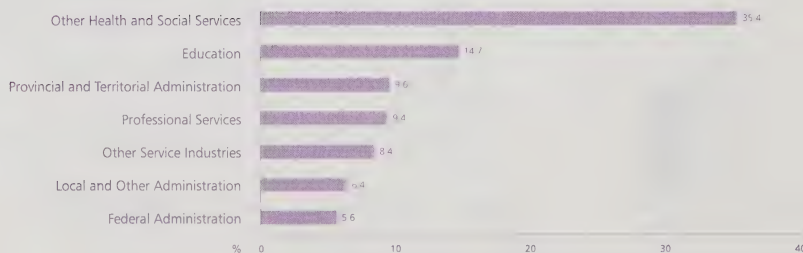
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work for government, law firms, social service and private employment agencies, group homes, hospitals, prisons and correctional facilities, rehabilitation centres, nurseries and day-care centres, elementary and high schools, and places of worship.

- Paralegals and legal assistants prepare legal documents, maintain records and conduct research to assist lawyers.
- Trademark agents prepare trademark applications.
- Community and social service workers administer community services and social assistance programs.
- Employment counsellors provide assistance with employment searches and career planning.
- Instructors and teachers of persons with disabilities teach skills to children and adults with physical and developmental disabilities.
- Driving instructors teach vehicle driving skills.
- Drivers licence examiners conduct road tests to determine drivers' eligibility for licensing.
- Brothers, nuns and other religious workers provide support to ministers of religion and their religious communities.

## Where They Work

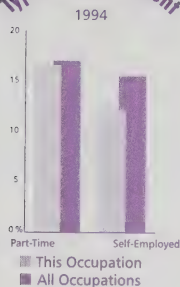


## Education, Training and Experience

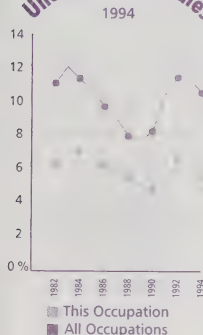
People in this group usually need a college diploma, a bachelor's degree or expertise in their area of work.

- Employment counsellors may substitute a high school diploma and several years' experience related to counselling for postsecondary school education.
- Driving instructors must obtain a licence in their province of work.

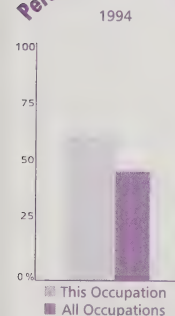
## Type of Employment



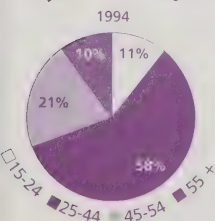
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

127,000 workers were employed in these occupations in 1994 — a 50% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

- 49% of these workers are community and social service workers.
- About the same proportion work part-time in this occupational group as the average for all occupations.
- Self-employment is below the average for all occupations.
- 60% of these workers are women, a percentage significantly higher than the average for all occupations.
- There are relatively few young workers, reflecting the educational requirements of these occupations.
- The unemployment rate is significantly lower than the national rate.
- Full-time earnings for this group are somewhat above average levels.
- Employment in these occupations is moderately sensitive to changing economic conditions and is somewhat seasonal.

**Current labour market conditions for this occupational group are good.**

## Looking to the Year 2000

Labour market conditions for this group are expected to worsen from good to fairly good over the next five years.

- Government cutbacks to social services are likely to decrease employment opportunities in these occupations.
- Other health and social services, education and professional business are all expected to contribute equally to job opportunities for this group over the next five years. Jobs related to provincial administration are expected to require fewer workers from this occupational group.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

**See also:** This Occupation Code: 421. Related Codes: 4211, 4212, 4215. Vol. 2 Field of Study Cross-index: U11, U22, U83, U86, U88. For further information, see List of Associations.

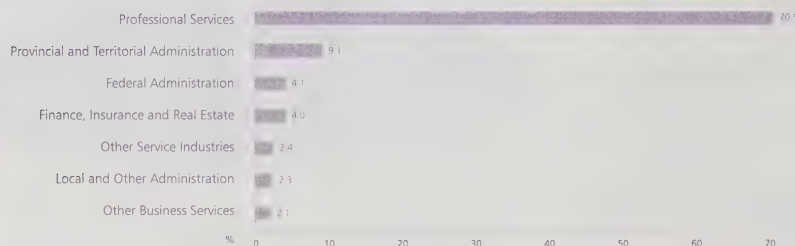
# Paralegal and Related Occupations

## At Work

People in this occupation work in law firms and in legal departments throughout the public and private sectors. Trademark agents are also employed by trademark development and searching firms. Trademark agents and paralegals may also be self-employed.

- Paralegals and legal assistants in law firms prepare legal documents, maintain records and files, and conduct research. They may also conduct interviews.
- Notaries public prepare promissory notes, wills, mortgages and other legal documents. They may also administer oaths, take affidavits and depositions, and witness and certify the validity of signatures on documents.
- Trademark agents research and prepare trademark applications.
- Independent paralegals provide certain legal services as allowed by provincial legislation. They may represent clients in small claims court.

## Where They Work



## Education, Training and Experience

People in this occupation must have a high school diploma.

- Legal assistants and paralegals must complete a bachelor's degree in law or a college diploma in a legal assistant or law clerk program or in-house training.
- Notaries public must complete a one-year university notary public course and in-house training at their workplace. They also require a provincial licence. In British Columbia, they must be members of the Society of Notaries Public.
- Trademark agents must complete two years' in-house training and an examination conducted by the Patent and Trade Mark Institute of Canada. They must also register with the federal Trade Mark Office.
- Independent paralegals usually obtain their education through experience and industry sponsored courses.

## Full-Time Earnings

1993

\$61,600

\$42,700

\$23,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

16,000 workers were employed as paralegals in 1994 — a 63% increase since 1984. Over the same period, economy-wide employment grew by 17%. Recent employment trends in this occupation are highly favourable.

- A lower than average proportion of paralegals are employed part-time.
- Women make up 76% of workers in this occupation.
- The age distribution in this occupation is similar to the overall work force.
- The unemployment rate for paralegals is well below the national rate.
- Full-time earnings for this occupation are above average levels.
- Employment in this occupation is moderately sensitive to changing economic conditions and is not seasonal.

**Current labour market conditions for paralegals are good.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen from good to fairly good or poor over the next five years.

- Technological change will affect how paralegals work, requiring more use of computerized databases. It will also result in demand for specialists in technological legal issues.
- Government cutbacks to legal aid may decrease employment growth for paralegals. This may be offset to some extent if the work of paralegals is substituted for the more expensive work of lawyers.
- Most employment growth is expected in the area of professional business services. Much slower growth is expected in provincial administration and in finance, insurance and real estate.

## Work Prospects

1995 to 2000

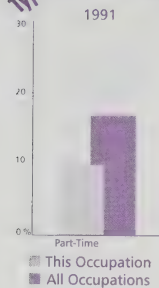
Getting Better

Stable

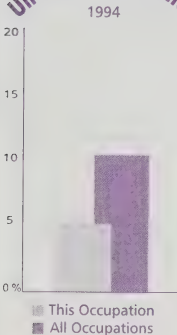
Getting Worse

How will labour market conditions change in this group?

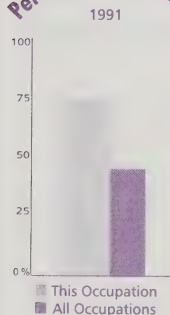
### Type of Employment



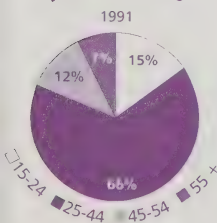
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 4211. Related Code: 421.  
Vol. 2 Field of Study Cross-index: U11, U22, U45, U85, C111.  
For further information, see List of Associations.





# Community and Social Service Workers

## Full-Time Earnings

1993

\$32,100

\$35,400

\$18,100

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

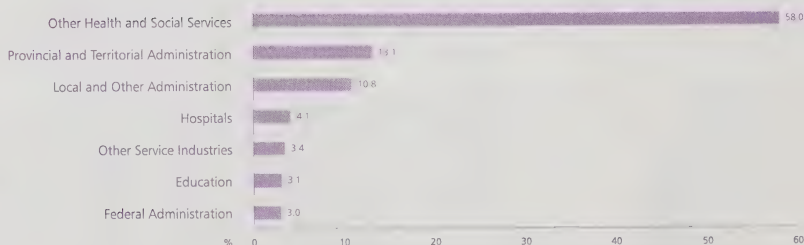
## At Work

People in this occupation work in social service and government agencies, group homes, correctional facilities and other organizations. Their duties may require them to:

- Interview clients to obtain case histories and prepare intake reports;
- Assess and investigate clients' eligibility for social benefits, and advise clients regarding social assistance and pensions;
- Refer clients to other social services;
- Counsel and provide assistance to clients living in group homes and halfway houses, and supervise their activities;
- Provide crisis intervention and emergency shelter services;
- Implement programs such as life skills workshops, substance abuse treatment and youth services under the supervision of social workers or health care professionals; and
- Assist in evaluating the effectiveness of treatment programs.

This occupation includes addictions workers, native outreach workers, youth workers, rehabilitation workers, family service workers, drop-in centre workers and welfare and compensation officers.

## Where They Work



## Education, Training and Experience

People in this occupation usually complete a university or college program in social work, counselling or other social science discipline.

- For some positions, previous experience in a social service environment as a volunteer or in a support capacity may replace formal education requirements.
- With additional training and experience, people in this occupation may progress to professional occupations in social services such as family and marriage counsellors, social workers and probation officers.

## About this Occupation

62,000 workers were employed as community and social service workers in 1994 — 62% more than in 1984. Over the same period, economy-wide employment grew by 17%. Recent employment trends in this occupation are favourable.

- An average proportion of community and social service workers are employed part-time.
- Women make up 72% of workers in this occupation.
- Workers 25 to 44 years old are somewhat overrepresented in this occupation, relative to the overall work force.
- The unemployment rate for community and social service workers is well below average levels.
- Full-time earnings for this occupation are somewhat above average levels.
- Employment in this occupation is moderately sensitive to changing economic conditions and is not seasonal.

**Current labour market conditions for community and social service workers are good.**

## Looking to the Year 2000

Labour market conditions for community and social service workers are expected to worsen from good to fairly good over the next five years.

- Government cutbacks to health and social services are likely to affect employment prospects in this occupation severely. In the longer run, an ageing population will increase demand for the services of these workers.
- As provincial and territorial administrations are expected to reduce the number of employees in this occupation, most job opportunities are expected to be centred in other health and social services, as well as in local and other government.

## Work Prospects

1995 to 2000

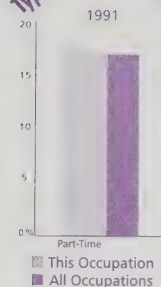
Getting Better

Stable

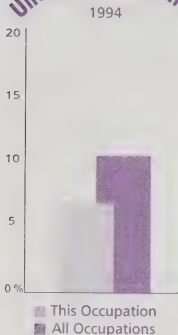
Getting Worse

How will labour market conditions change in this group?

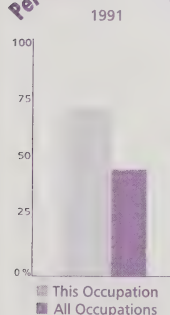
### Type of Employment



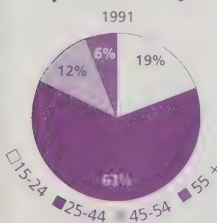
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 4212. Related Code: 421.  
Vol. 2 Field of Study Cross-index: U84, U86, U88, U89, C21.  
For further information, see List of Associations.



# Instructors and Teachers of Disabled Persons

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

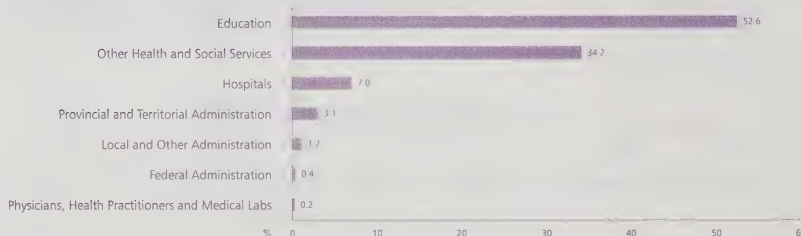
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this occupation work in rehabilitation centres and elementary and high schools. Their duties may require them to:

- Instruct students who are blind and visually impaired in reading and writing braille and in the use of special equipment;
- Instruct students who are deaf and hearing-impaired in lip-reading, finger spelling and sign language;
- Instruct student who are hearing-impaired in the formation and development of sounds for speech using hearing aids and other devices;
- Instruct persons with physical disabilities and their families in the use of rehabilitative techniques, prosthetic devices, wheelchairs and other equipment; and
- Assist individuals with physical or developmental disabilities to develop life skills.

## Where They Work



## Education, Training and Experience

People in this occupation usually require a bachelor's degree in education or a related field such as psychology or social work.

- They must complete an appropriate training program in rehabilitation or special education.
- Instructors of the blind require certification by the Canadian National Institute for the Blind.
- Teachers who work in public schools require provincial teaching certificates.

## About this Occupation

18,000 workers were employed as teachers of persons with disabilities in 1994 — a 37% increase over 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- A somewhat higher than average proportion of these teachers are employed part-time.
- Women make up 77% of the workers in this occupation.
- There are relatively few young workers, reflecting the educational requirements of this occupation.
- The unemployment rate is very low in comparison to the national rate.
- Full-time earnings for this occupation are somewhat above average levels.
- Employment in this occupation is moderately sensitive to changing economic conditions and is somewhat seasonal.

**Current labour market conditions for teachers of disabled persons are very good.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to worsen from very good to good over the next five years.

- There is an increasing concern in society for people with disabilities but public funds in a number of areas are dwindling. Government cutbacks will affect this occupation, but the impact may be less than for other social services workers.
- Moderate job growth in education is expected for this occupation over the next five years. Fewer jobs are expected in other health and social services, provincial and territorial administration, and hospitals.

## Work Prospects

1995 to 2000

Getting Better

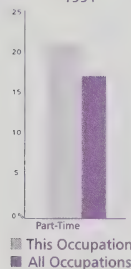
Stable

Getting Worse

How will labour market conditions change in this group?

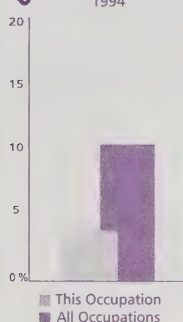
### Type of Employment

1991



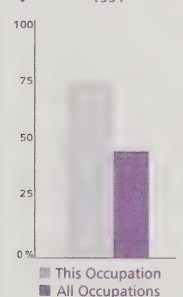
### Unemployment Rates

1994



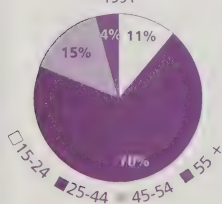
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 4215. Related Code: 421.  
Vol. 2 Field of Study Cross-index: U22, U86, U89, C21, C84.  
For further information, see List of Associations.





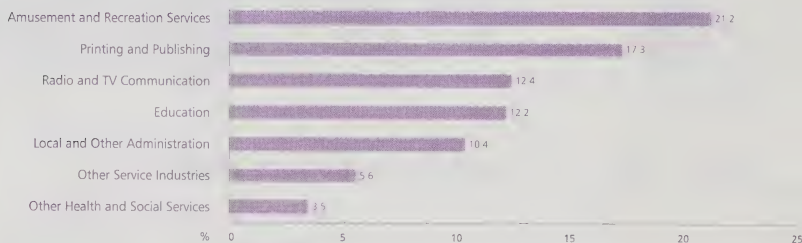
# Managers in Art, Culture, Recreation and Sport

## At Work

These managers work in libraries, archives, museums, art galleries, for newspaper and other publishers, in motion picture, broadcasting and other performing arts institutions, in recreation and sport centres and in government.

- Managers of libraries, archives, museums and art galleries plan and direct the activities of these organizations or technical departments within them.
- Managers in publishing, motion pictures, broadcasting and other performing arts plan and direct the operations of newspapers, publishing firms, radio and television stations, and film, theatre, record and video production companies.
- Managers in recreation and sport plan and direct the activities, projects and operations of recreational facilities and sports programs and services. They also manage professional athletic teams and national and provincial sports agencies.

## Where They Work



## Education, Training and Experience

Most of these managers require advanced university degrees and several years' experience in their profession, field or industry. Some may need supervisory experience.

- Library managers must have a graduate degree in library and information science.
- Archive managers need a graduate degree in archival science or history.
- Museum and art gallery managers usually require a graduate degree related to arts administration.
- Managers in publishing, motion pictures and other performing arts have a university degree or college diploma in communication, journalism, broadcasting or other arts discipline.
- Recreation and sports managers need a university degree in recreology, physical education, sports administration or a related field, or a college diploma in recreation or sports administration. They may require certification in an area such as coaching.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

25,000 workers were employed in this group in 1994 — 43% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are highly favourable.

- Half of these people work as broadcasting and performing arts managers.
- 14% of workers are employed part-time — closer to the economy-wide average than in most managerial occupations.
- Self-employment has increased since 1984 and is now higher than the national average.
- Since 1984, the percentage of women has increased steadily, reaching the national average in 1994.
- There are relatively few young people in these occupations, but more than in other management occupations.
- The unemployment rate is much less than the national average.
- Full-time earnings are higher than the national average but lower than in most other management occupations.
- Employment is moderately sensitive to economic conditions but not to seasonal factors.

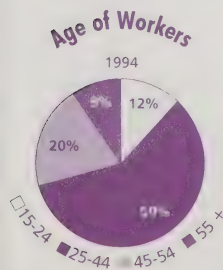
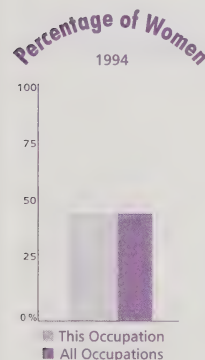
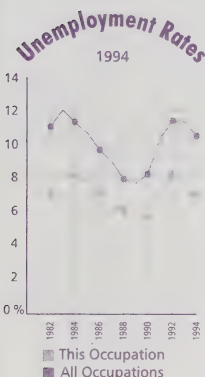
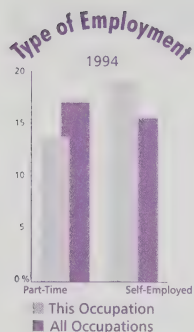
**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this group will remain good through the year 2000.

- There may be shortages of administrators with fund-raising and market-development skills. Technological change will have a large impact in the audio-visual area, increasing the need for skills enhancement.
- Competition will be keen for job openings in libraries and galleries because fiscal restraint at all levels of government will curtail these services.
- Radio and TV communication, along with amusement and recreation services, are expected to provide most of the employment opportunities for this group over the next five years. A smaller, but significant, contribution to job growth is expected from the publishing industry.

See also: This Occupation Code: 051.  
Vol. 2 Field of Study Cross-index: U11, U43, U49, U88, C42.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?

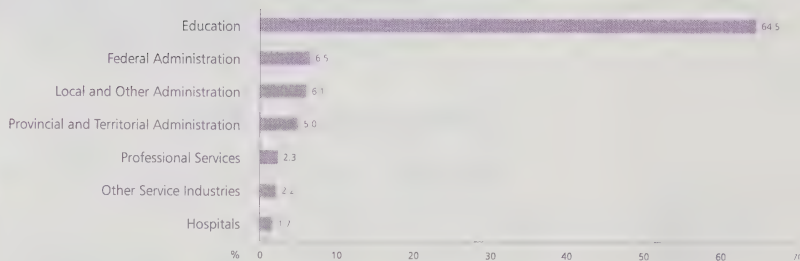
# Librarians, Archivists, Conservators and Curators

## At Work

People in this group work in schools and for government, libraries, archives, museums, art galleries and other organizations. They may be self-employed.

- Librarians develop, organize and maintain library collections and provide advisory services for users. They perform manual and on-line reference searches, arrange inter-library loans and supervise technicians, assistants and clerks. They may specialize in particular collections.
- Archivists acquire, research and store historical documents, photographs, maps, audio-visual and other materials. They ensure the preservation and storage of these materials and develop classification systems so that users can gain access to them.
- Conservators restore and conserve paintings, photographs, sculptures, furniture, pottery and other works of art and antiquity. They provide consultation to museums, art galleries and individuals, and supervise conservation technicians and other museum technicians. They may specialize in a particular conservation field.
- Curators recommend the acquisition of paintings, photographs, sculptures, documents and other museum and gallery artifacts. They research the origin and history of artifacts, develop the storyline and theme of displays and exhibitions, and supervise curatorial assistants and other museum technicians. They may specialize in particular collections.

## Where They Work



## Education, Training and Experience

People in this group usually have a university degree.

- Librarians need a master's degree in library science.
- Archivists usually require a master's degree in archival studies, library science or history.
- Conservators need a master's degree in art conservation or a college diploma in conservation technology and several years' experience in conservation work.
- Curators must have a bachelor's or master's degree in museology, art history or in a field related to their area of work.

## Full-Time Earnings

1993

\$52,400

\$36,500

\$20,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

16,000 workers were employed in these occupations in 1994 — an increase of 17% since 1984, exactly matching economy-wide employment growth for the same period. Recent employment trends in this occupational group are favourable.

- 82% of these workers are librarians.
- A somewhat greater than average proportion of workers are employed on a part-time basis.
- Very few workers in these occupations are self-employed.
- Close to 80% of these workers are women, almost double the average for all occupations.
- There are very few young workers, reflecting the educational requirements of these occupations.
- The unemployment rate in these occupations is significantly lower than the national rate.
- Full-time earnings in these occupations are slightly higher than average levels but are much lower than in most other professional occupations.
- Employment in these occupations is moderately sensitive to changing economic conditions but is not seasonal.

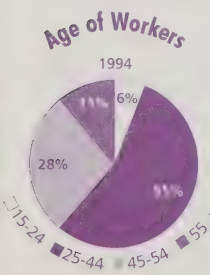
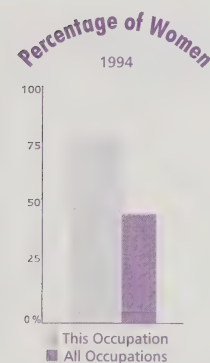
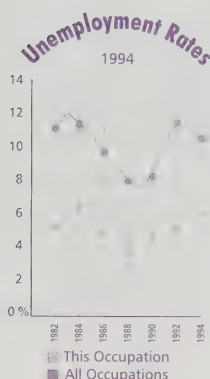
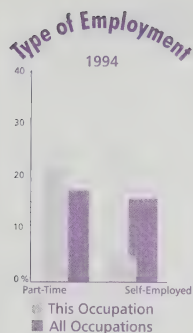
**Current labour market conditions for this group of occupations are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to worsen from good to fairly good or poor over the next five years.

- Government cutbacks in the cultural sector are likely to decrease employment opportunities for librarians, archivists and curators.
- Technological change and, in particular, the growing segment of the population with access to the Internet, may favour centralized library services and thus force smaller libraries to restructure their operations. Maintenance of computer archives is likely to be an important source of employment for archivists.
- Overall job growth is expected to be very slow for this group over the next five years, as job losses are expected in education. Relatively better opportunities are expected in local and provincial administration.

See also: This Occupation Code: 511.  
Vol. 2 Field of Study Cross-index: M47, U43, C112.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



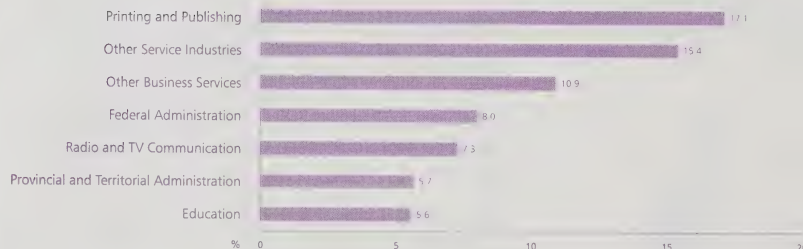
# Writing, Translating and Public Relations Professionals

## At Work

People in this group work for governments, advertising agencies, large corporations, private consulting firms, magazines, journals, newspapers and other publishers, radio and television networks and stations, social agencies, private translation and interpreting agencies, and international and other organizations. They may also be self-employed.

- Writers research and write books, scripts, plays, essays, speeches, manuals, specifications and other non-journalistic articles.
- Editors review, evaluate and edit manuscripts, articles, news reports and other material for publication and broadcast, and co-ordinate the activities of staff.
- Journalists research, investigate, interpret and communicate news and public affairs through newspapers, television, radio and other media.
- Specialists in public relations and communications develop and implement communications strategies and information programs, publicize activities and events, and maintain media relations on behalf of clients.
- Translators adapt written material from one language to another.
- Interpreters translate oral communication from one language to another.
- Sign-language interpreters translate sign language to spoken language and vice versa.

## Where They Work



## Education, Training and Experience

People in this group usually require a college diploma or university degree in their area of work.

- Translators, terminologists and interpreters usually need graduate-level studies. They may require certificates and membership in their professional organization.
- Translators and interpreters working for international organizations usually require fluency in three languages.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

74,000 workers were employed in these occupations in 1994 — an increase of 57% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

- 34% of workers in these occupations are in public relations and communications, 22% are writers and 20% are journalists.
- The proportion working part-time is slightly below average.
- The proportion of self-employed workers in these occupations is well above the average for all occupations, and has grown strongly over the last 10 years.
- Over half the workers are women, slightly above the average for all occupations.
- There are few young workers, due to the educational requirements of these occupations.
- The unemployment rate is much lower than the national rate.
- Full-time earnings for this group are somewhat above average levels. They are the highest for any occupational group in arts and culture but are lower than in most other professional occupations.
- Employment in these occupations is moderately sensitive to economic conditions and is not seasonal.

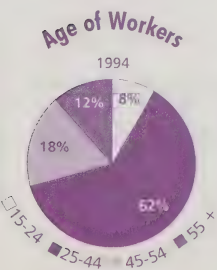
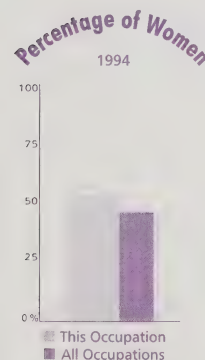
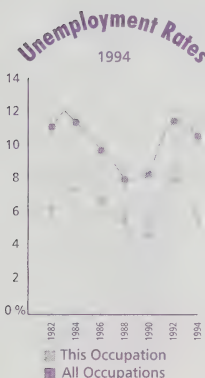
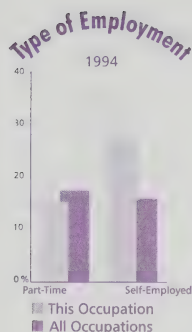
**Current labour market conditions for this group of occupations are good.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to improve somewhat over the next five years but remain good.

- A number of provinces are doing away with their bilingual programs, and the federal government has also rationalized its translation programs. This situation may affect translators unfavourably.
- Strong employment growth for this group is distributed over many industries with advertising, radio and TV, business services, and printing and publishing leading in job creation.

**See also:** This Occupation Code: 512. Related Codes: 5121, 5122, 5124. Vol. 2 Field of Study Cross-index: U11, U43, U49, C42. For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Writers

## At Work

People in this occupation work in advertising agencies, governments, large corporations, private consulting firms, publishing firms and other organizations. Self-employed writers work on a free-lance basis.

- Creative writers such as novelists, playwrights, script writers, poets and humorists conceive and write material for publication or presentation. They may conduct research for factual content and obtain other necessary information.
- Technical and specifications writers analyze material such as specifications, notes and drawings and write manuals, user guides and other documents to explain the installation, operation and maintenance of electronic, mechanical and other equipment.
- Copywriters study and determine selling features of products and services and write text for advertisements and commercials.
- Writers may specialize in a particular subject or type of writing.

This occupation also includes television writers, essayists, speech writers and scientific writers.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this occupation have different educational requirements, depending on their specialization.

- Technical writers usually require a university degree in an area of specialization such as computer science or engineering.
- Copywriters usually require a university degree or college diploma in English, French, marketing or another discipline.
- Creative writers may take creative writing programs offered by universities and colleges.
- Most people in this occupation require talent and ability, as demonstrated by a portfolio of work, in order to be hired.

## About this Occupation

17,000 workers were employed as writers in 1994 — an increase of approximately 57% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- A somewhat above average proportion of writers is employed part-time.
- The proportion of women working as writers and editors is slightly above the average for all occupations.
- There are few young workers, reflecting the educational requirements of this occupation.
- The unemployment rate for writers is well below the national rate.
- Full-time earnings in these occupations are somewhat higher than average levels.
- Employment in this occupation is moderately sensitive to changing economic conditions and is not seasonal.

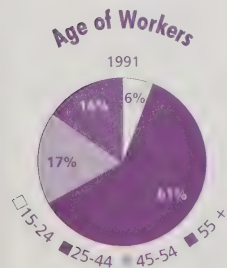
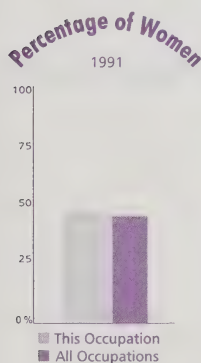
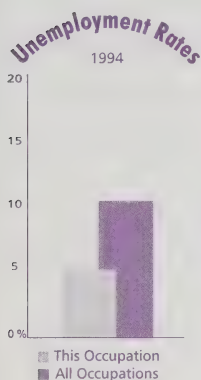
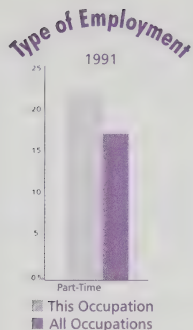
**Current labour market conditions for writers and editors are good.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to improve somewhat over the next five years but remain good.

- As more people have access to computer communication tools (modems, etc.) at home and in the office, an increasing number of writing and editing assignments will be done at home or by self-employed individuals.
- Technological change will increase demand for specialized writers and editors in the areas of program manuals, specialty magazines and trade journals.
- Printing and publishing, radio and TV, and advertising are expected to continue to lead moderate job growth for these workers over the next five years.

**See also:** This Occupation Code: 5121. Related Code: 512.  
Vol. 2 Field of Study Cross-index: U43, U45, U85, C42.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Editors

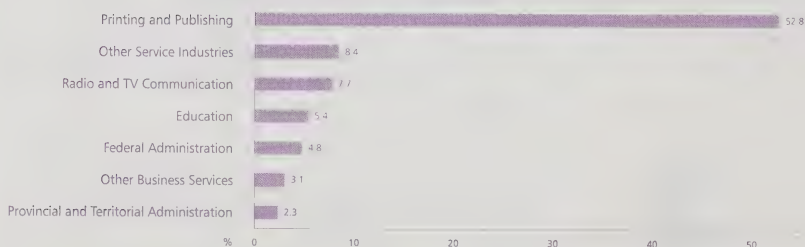
## At Work

Editors work for publishing firms, magazines, journals, newspapers, radio and television networks and stations, and for companies and government departments that produce publications. They may also be self-employed. Their duties may require them to:

- Evaluate manuscripts, articles, news copy and wire service dispatches for publication or broadcast;
- Recommend or make changes in content, style and organization of submitted copy;
- Correct errors in spelling, grammar and syntax, and shorten or lengthen copy as required;
- Confer with authors, staff writers, reporters and others regarding revisions to copy;
- Plan layout or format of copy according to printed space or broadcast time;
- Plan and co-ordinate activities of staff and ensure deadlines are met;
- Plan coverage of upcoming events and assign work;
- Negotiate royalties and payments to authors and free-lance writers; and
- Specialize in particular subjects such as sports or in particular types of publications such as newspapers.

This occupation also includes advertising editors, art editors, news editors, photo editors and production editors.

## Where They Work



## Education, Training and Experience

Editors usually require a bachelor's degree in journalism, English, French or a related discipline.

- They usually must have several years' experience in journalism, writing, publishing or a related field.
- With experience, they may progress to management positions such as editor-in-chief or managing editor.

## Full-Time Earnings

1993

\$60,100

\$34,900

\$19,700

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

7,000 workers were employed as editors in 1994 — an increase of approximately 40% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- The share of editors working part-time is below average.
- The proportion of women working as editors is slightly above the average for all occupations.
- There are very few young workers, reflecting the educational requirements for this occupation.
- The unemployment rate for editors is well below the national rate.
- Full-time earnings in this occupation are somewhat higher than average levels.
- Employment in this occupation is moderately sensitive to changing economic conditions and is not seasonal.

**Current labour market conditions for editors are good.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to improve somewhat over the next five years but remain good.

- As more people have access to computer communication tools (modems, etc.) at home and in the office, an increasing number of editing assignments will be done at home or by self-employed individuals.
- Technological change will increase demand for specialized editors in the areas of program manuals, specialty magazines and trade journals.
- Printing and publishing, radio and TV, and advertising are expected to continue to lead moderate job growth for this occupation over the next five years.

## Work Prospects

1995 to 2000

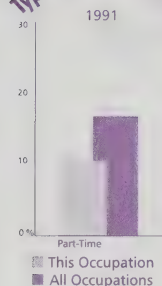
Getting Better

Stable

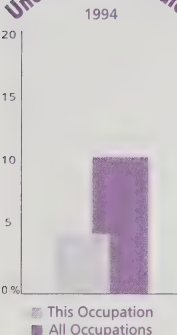
Getting Worse

How will labour market conditions change in this group?

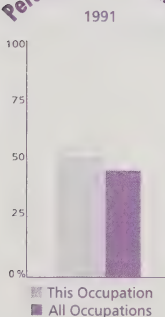
### Type of Employment



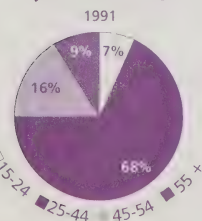
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 5122. Related Code: 512.  
Vol. 2 Field of Study Cross-index: U43, U85, C42.  
For further information, see List of Associations.

# Professional Occupations in Public Relations and Communications

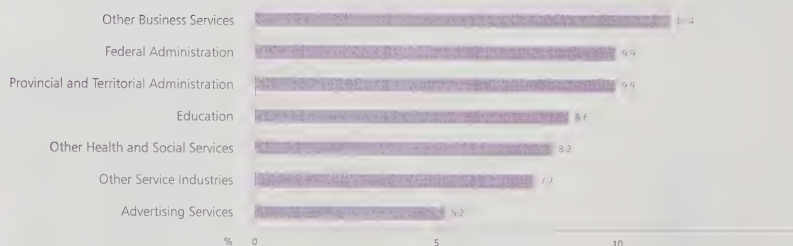
## At Work

People in this occupation work for consulting firms, corporations, associations, government, social agencies and other organizations. They may also be self-employed. Their duties may require them to:

- Develop, implement and evaluate communications strategies and programs to inform clients, employees and the public of initiatives and policies of businesses, government and other organizations;
- Gather, research and edit material for in-house and public audiences;
- Prepare or oversee the preparation of reports, briefs, bibliographies, speeches, presentations and press releases;
- Develop and organize workshops, meetings, ceremonies and other events for publicity, fund-raising and other information purposes;
- Prepare and deliver educational and publicity programs to increase awareness of museums, galleries and other tourist attractions;
- Initiate and maintain contact with the media;
- Arrange interviews and news conferences; and
- Assist in the preparation of brochures, reports, newsletters and other material.

This occupation also includes fund-raising consultants, media relations officers, museum educators, press secretaries and publicists.

## Where They Work



## Education, Training and Experience

People in this occupation usually require a university degree or college diploma in public relations, communications, journalism or a discipline related to a particular subject matter.

- With additional training and experience, they may progress to managerial positions in public relations and communications.

## Full-Time Earnings

1993

\$58,300

\$38,900

\$19,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

25,000 workers were employed in this occupation in 1994—75% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- The proportion of workers employed part-time is below average.
- Over 60% of workers in public relations and communications are women, well above the average.
- There are relatively few young workers, reflecting the educational requirements of these jobs.
- The unemployment rate for this occupation is significantly lower than the national rate.
- Full-time earnings for this occupation are somewhat higher than average levels.
- Employment in this occupation is moderately sensitive to changing economic conditions and is not seasonal.

**Current labour market conditions in public relations and communications are good.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to improve somewhat over the next five years but remain good.

- As more and more people have access to computer communication tools (modems, etc.) at home and in the office, an increasing number of public relations and communications assignments will be done at home or by people operating as self-employed individuals.
- Strong employment growth is distributed over many industries, led by business services, advertising and provincial and territorial administration.

## Work Prospects

1995 to 2000

Getting Better

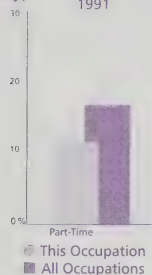
Stable

Getting Worse

How will labour market conditions change in this group?

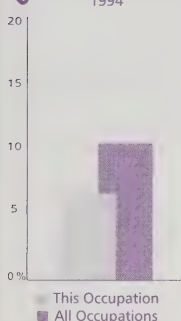
### Type of Employment

1991



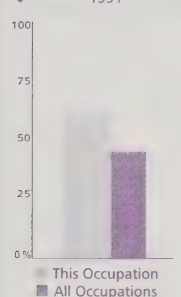
### Unemployment Rates

1994



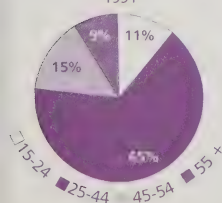
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 5124. Related Code: 512.  
Vol. 2 Field of Study Cross-index: M11, U11, U85, U89, C14.  
For further information, see List of Associations.





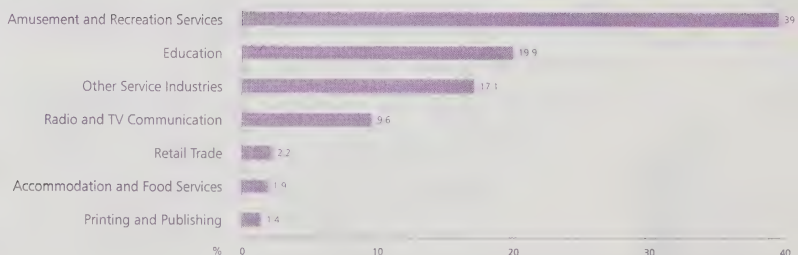
# Creative and Performing Artists

## At Work

People in this group work for film production, radio and television companies and stations, broadcasting departments, sound recording studios, record production, ballet and dance companies, symphony orchestras, bands, choirs, night clubs, dance academies, and private acting and dance schools. They may also be self-employed.

- Film, television and radio producers manage the production of motion pictures, television shows and radio programs.
- Directors interpret scripts, select casts and direct performers and other aspects of productions.
- Record producers plan and co-ordinate musical recordings.
- Directors of photography plan and co-ordinate the photography of motion pictures.
- Conductors select and interpret musical works, and lead bands, orchestras and choirs.
- Arrangers adapt and modify musical compositions to convey desired themes.
- Musicians play one or more instruments.
- Singers sing musical arrangements.
- Actors perform roles in motion picture, television and radio productions.
- Painters, sculptors and other visual artists create original paintings, drawings, sculptures, engravings and other art works.

## Where They Work



## Education, Training and Experience

People in this group usually need a college diploma, university degree or other formal training in their area of work.

- They may require experience and be able to demonstrate directing, creative or performing skills.

## Full-Time Earnings

1993

\$66,200

\$34,800

\$7,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

68,000 workers were employed in these occupations in 1994 — an increase of 41% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

- 43% are musicians and singers, 21% production managers, and 19% are visual artists.
- The proportion of artists working part-time is slightly above the average for all occupations.
- 36% of artists are self-employed, double the average for all occupations.
- The proportion of women artists almost exactly matches women's share of the total work force.
- The age distribution of artists is similar to that of the overall work force.
- The unemployment rate for creative and performing artists is somewhat below the national rate.
- Full-time earnings for this group are at average levels, the lowest level for any professional occupational group.
- Employment in these occupations is moderately sensitive to changing economic conditions and is not seasonal.

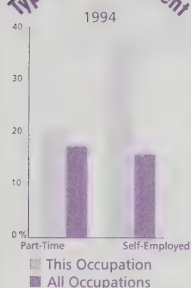
**Current labour market conditions for creative and performing artists are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

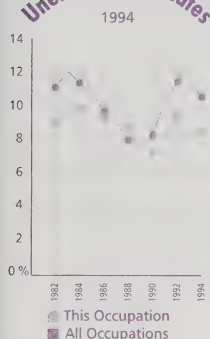
Labour market conditions in these occupations are expected to remain fairly good through the year 2000.

- Government cutbacks in the cultural sector are likely to affect these occupations unfavourably, especially performing artists.
- Amusement and recreation, education and other services are expected to continue to be the centre of job creation for this group over the next five years.

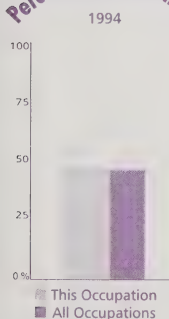
Type of Employment



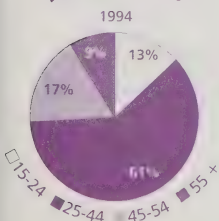
Unemployment Rates



Percentage of Women



Age of Workers



Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 513.  
Vol. 2 Field of Study Cross-index: U22, U43, U49, C42.  
For further information, see List of Associations.



# Technical Occupations in Libraries, Archives, Museums and Galleries

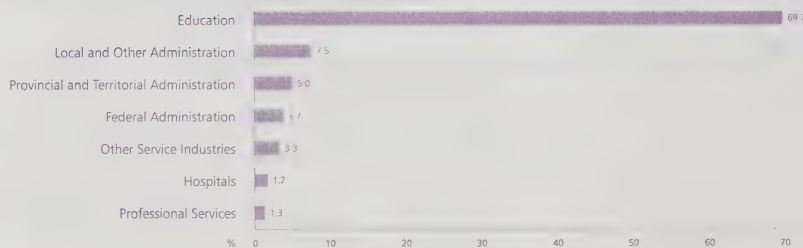
## At Work

People in this group are employed by libraries, archives and organizations with library and archive services, museums, galleries and retail organizations. They may also be self-employed. They may specialize in a specific type of collection.

- Library and archive technicians and assistants help users get information from library and archive resources, assist librarians and archivists in cataloguing new acquisitions and conduct reference searches.
- Conservation and restoration technicians assist conservators to preserve and restore artifacts.
- Curatorial assistants help research, handle and store artifacts.
- Museum guides and interpreters conduct museum and gallery tours of exhibitions.
- Museum registrars and cataloguers classify and register artifacts and supervise inventory control.
- Preparators construct displays and dioramas, and prepare artifacts for storage or shipping.
- Picture framers fabricate custom frames and mount paintings and other art work.

This occupational group also includes reference and circulation assistants.

## Where They Work



## Education, Training and Experience

People in this group usually need a postsecondary qualification and specialized training.

- Most require a college program in museum studies or conservation technology or other technical or on-the-job training programs.
- Library and archive technicians and assistants usually require a college library technician diploma or a university degree in a social science discipline.
- Registrars and cataloguers may require a university degree in a field related to museum and gallery work.

## Full-Time Earnings

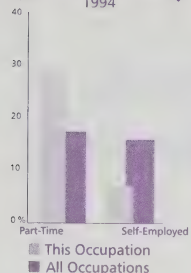
1993



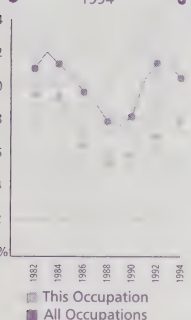
## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

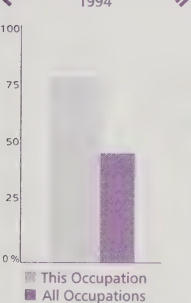
## Type of Employment



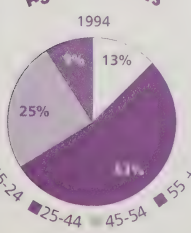
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

17,000 workers were employed in these occupations in 1994 — an increase of 7% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 82% are library and archival technologists.
- The proportion of workers employed part-time in these occupations is well above the average for all occupations.
- The proportion of these workers who are self-employed is less than half the average for all occupations.
- Women make up 79% of all workers in these occupations.
- The age distribution of workers in these occupations is similar to the overall work force.
- The unemployment rate is somewhat lower than the national rate.
- Full-time earnings in this group of occupations are below average levels.
- Employment in these occupations is moderately sensitive to changing economic conditions but is not seasonal.

**Current labour market conditions in this group of occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to worsen somewhat over the next five years but remain fairly good.

- Technological change and, in particular, the growing segment of the population with access to the Internet may favour centralized library services and thus force smaller libraries to restructure their operations. Library and archival technicians increasingly will use computerized cataloguing and database systems.
- Employment for this group is centred in education which is expected to experience a decline in overall employment over the next five years. In contrast, job growth is expected in local and other government administration.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 521.  
Vol. 2 Field of Study Cross-index: M47, U43, U45, C112.  
For further information, see List of Associations.





# Photographers, Graphics Arts Technicians and Technical Occupations in Motion Pictures, Broadcasting and the Performing Arts

Full-Time Earnings  
1993



Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

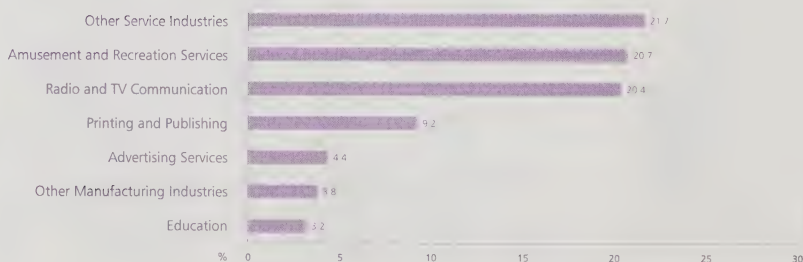
## At Work

These people work for photographic studios, government, radio and television stations, film, video, sound recording, theatre, publishing, advertising and printing companies. They may also be self-employed.

- Photographers photograph people and other subjects. They may specialize in a particular area such as portrait or scientific photography.
- Film and video camera operators record news and live events, and film videos and television broadcasts.
- Graphics arts technicians produce and assemble artwork, photographs and lettering and prepare designs for camera-ready printing.
- Audio and video recording technicians record, mix and edit sound, music and videotape for films, television, radio, videos, recordings and live events.

This occupational group also includes floor directors, lighting technicians, stunt co-ordinators, special effects technicians, make-up artists, wardrobe supervisors, motion picture projectionists, set dressers and stagehands.

## Where They Work



## Education, Training and Experience

People in this group usually need a high school diploma.

- Most require a college diploma, university degree or specialized training and experience in their area of work.
- They may substitute on-the-job training for formal education requirements.
- Projectionists need a provincial licence.

## About these Occupations

38,000 workers were employed in these occupations in 1994, an increase of 27% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 28% are photographers, 18% graphic arts technologists and 15% audio and video recording technologists.
- 15% of these workers are employed part-time, slightly below the average for all occupations.
- 34% are self-employed, about twice the average of all occupations.
- Women make up 40% of the workers in these occupations, somewhat below average.
- There are somewhat fewer young workers than in the overall work force.
- The unemployment rate is somewhat below the national rate.
- Full-time earnings are slightly below average levels.
- Employment in this group is moderately sensitive to business conditions but is not seasonal.

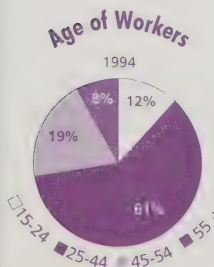
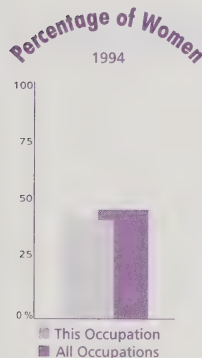
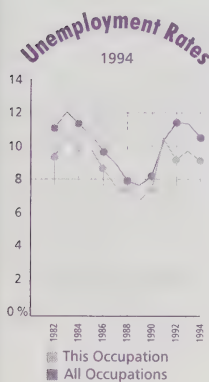
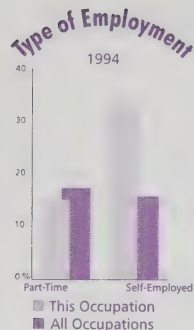
**Current labour market conditions for this group of occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain fairly good through the year 2000.

- Technological change and, in particular, the introduction of laser technology and of numerical photography, will result in many people in these occupations using computers in their work.
- Amusement and recreation services, and radio and TV broadcasting are expected to be job growth areas for this group over the next five years. Other service industries related to this occupation are also expected to grow but at a slower rate.

See also: This Occupation Code: 522.  
Vol. 2 Field of Study Cross-index: U01, U49, C03, C05, C42.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Announcers and Other Performers

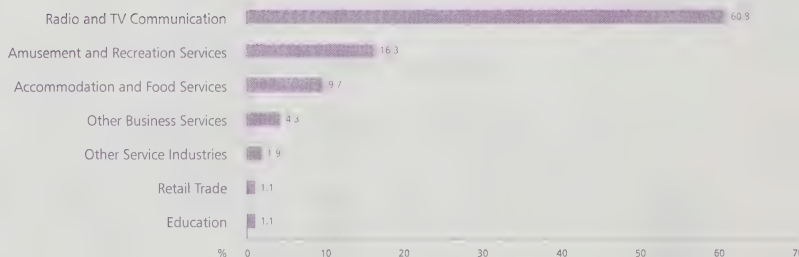
## At Work

People in this group work for radio and television stations and networks, circuses and nightclubs, and for theatre, advertising and other production companies. They may also be self-employed.

- Announcers and other broadcasters read the news, sports, weather and commercial messages, and host entertainment and information programs for broadcast on radio or television. They may specialize in areas such as news, sports, weather or traffic-reporting, and present their own material or material prepared by others.
- Circus performers such as trapeze artists, high-wire walkers, clowns and jugglers entertain audiences at circuses.
- Buskers entertain passers-by on sidewalks, malls and other areas with magic tricks, juggling acts, short dramatic works and other entertainment activities.
- Magicians and illusionists perform sleight-of-hand and other tricks to entertain audiences.
- Models display clothing and other merchandise in commercials, advertisements and fashion shows. They also pose for photographers and artists.
- Puppeteers operate puppets and marionettes.

This occupational group also includes disk jockeys, radio hosts/hostesses, talk show hosts/hostesses, traffic and weather reporters, acrobats and ventriloquists.

## Where They Work



## Education, Training and Experience

People in this group may require a high school diploma.

- They usually have to demonstrate talent and ability at auditions.
- Announcers and other broadcasters usually need a college radio or television arts diploma and may require training and experience.
- Circus performers and acrobats may need study at a circus school.
- Models usually require modelling courses.
- Many performers acquire their training under the guidance of another performer.

## Full-Time Earnings

1993

\$61,100

\$35,600

\$11,600

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

15,000 workers were employed in these occupations in 1994, an increase of 47% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

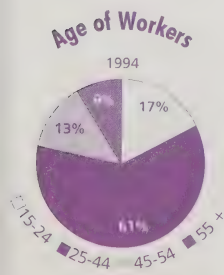
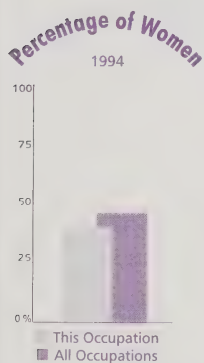
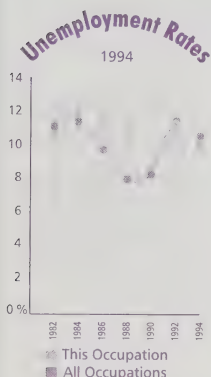
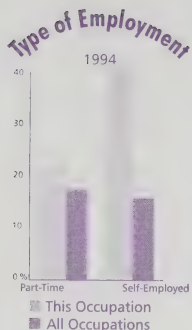
- 78% are announcers and broadcasters.
- 22% are employed part-time, slightly above the average of all occupations.
- 41% are self-employed, more than twice the national average.
- Women make up 40% of workers in these occupations, somewhat below average.
- A somewhat larger than average proportion of workers is between 15 and 34 years old.
- The unemployment rate is at about the national rate.
- Full-time earnings are slightly below average levels.
- Employment in these occupations is moderately sensitive to business conditions but is not seasonal.

**Current labour market conditions for this group of occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Current labour market conditions in these occupations are expected to remain fairly good through the year 2000.

- This group is expected to experience strong job growth in radio and TV broadcasting over the next five years. Smaller contributions to job growth are expected from the accommodation and food industry as well as from the recreation industry.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 523.  
Vol. 2 Field of Study Cross-index: U03, U43, U49, C42.  
For further information, see List of Associations.





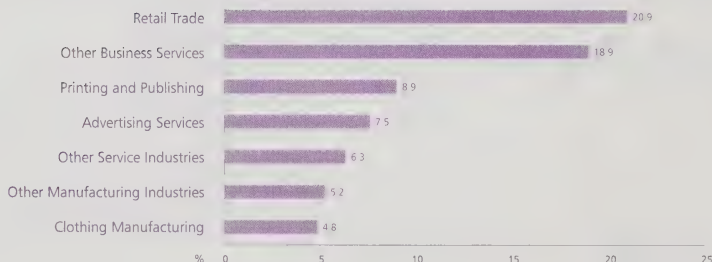
# Creative Designers and Craftspersons

## At Work

People in this group work for graphic design, advertising, architectural and interior design firms, for retail organizations and for performing arts, broadcasting, clothing and textile companies, museums, private studios and other organizations. They may also be self-employed.

- Graphics designers conceptualize and produce designs, illustrations, layouts and visual images for publications, advertising, films, posters and signs.
- Interior designers conceptualize and produce designs for interior spaces in residential, commercial and other buildings.
- Theatre designers conceptualize and produce designs for sets, costumes and lighting, fashion designers for clothing and accessories.
- Exhibit designers produce designs for museums, trade shows and retail spaces.
- Artisans and craftspersons produce wood, stone and other carvings, blown-glass objects, pottery, stained glass items, stringed instruments and other products.
- Pattern makers create master patterns for garments, footwear and other textile, leather and fur products.

## Where They Work



## Education, Training and Experience

People in this group usually need a high school diploma.

- Designers usually require a college diploma, university degree or other training program, and a portfolio of work that demonstrates creative ability.
- Interior designers may require registration with a provincial association.
- Pattern makers require college courses in design and pattern-making courses or on-the-job training. They may require computer-assisted pattern-making courses.
- Artisans and craftspersons may not require any high school education. Rather, they may learn skills through apprenticeship with a master craftsperson.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

65,000 workers were employed in these occupations in 1994, an increase of 22% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 43% are graphic designers and illustrators, and 30% are artisans and craftspersons.
- 15% work part-time, slightly below the average of all occupations.
- 37% are self-employed, more than double the national average.
- 47% are women, slightly above the average for all occupations.
- There are relatively few young workers, due to the education and training these occupations require.
- The unemployment rate is somewhat below the national rate.
- Full-time earnings are about four fifths of average levels, the lowest in any technical occupation in arts, culture, sports and recreation.
- Employment in these occupations is highly sensitive to business conditions but is not seasonal.

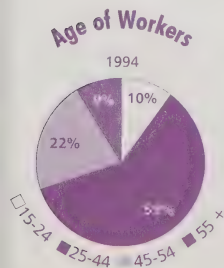
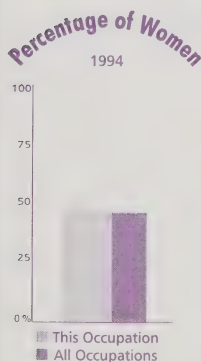
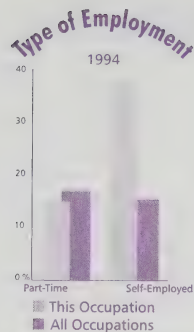
**Current labour market conditions in these occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain fairly good through the year 2000.

- More and more people in these occupations will rely on computers to perform their tasks, particularly in design and execution of their final products.
- Retail trade and other business services are expected to lead moderate job growth for this group over the next five years. In contrast, advertising is expected to employ fewer workers.

**See also:** This Occupation Code: 524. Related Code: 5241.  
Vol. 2 Field of Study Cross-index: U01, U49, C02, C03, C05.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Graphic Designers and Illustrating Artists

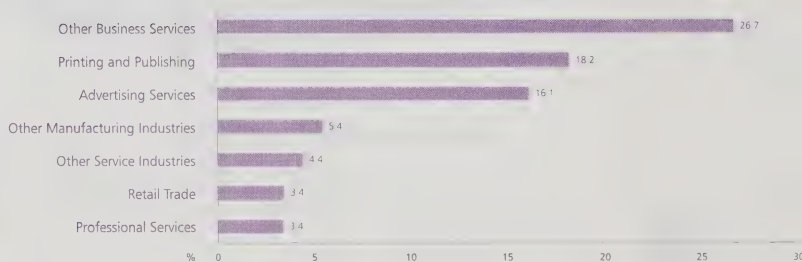
## At Work

People in this occupation work for advertising and graphic design firms and other organizations with advertising departments. Graphic designers and illustrating artists may also be self-employed. Their duties may require them to:

- Consult with clients to establish the nature and content of designs and illustrations for reproduction;
- Determine the best medium to produce the desired effect, and the method of reproduction;
- Prepare sketches, photographs and illustrations;
- Work by hand or with computerized graphic programs;
- Prepare specifications and estimate cost of materials and time to complete graphic design or illustration; and
- Produce final designs and illustrations or supervise the work of other graphic designers, illustrators and graphic arts technicians.

This occupation also includes animators, medical and scientific illustrators, commercial artists, advertising and layout designers, page designers and title artists.

## Where They Work



## Education, Training and Experience

People in this group must have a high school diploma and creative ability as demonstrated by a portfolio of work.

- They usually must complete a university degree in visual arts with a specialization in graphic arts, commercial art or photography, or a college or other program in graphic arts or commercial art.
- They may require experience as graphic arts technicians, which could replace formal education after high school.
- With experience, they may progress to management positions such as advertising manager.

## Full-Time Earnings

1993

\$30,500

\$31,000

\$14,100

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

28,000 workers were employed in this occupation in 1994, an increase of 33% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 12% work part-time, somewhat below the average of all occupations.
- Women make up 41% of the workers in this occupation, slightly below the average for all occupations.
- A very large proportion of workers is between 25 and 44 years old, and a small proportion is over 45 years old, relative to the overall work force.
- The unemployment rate is well below the national rate.
- Full-time earnings are below average levels.
- Employment in this occupation is moderately sensitive to business conditions but is not seasonal.

**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain fairly good through the year 2000.

- People in this occupation will use various computerized page layout and graphics design systems in their work more frequently.
- Job growth for this occupation is expected to be strongest in the area of business services, followed by printing and publishing. However, some job losses are expected in the advertising industry.

## Work Prospects

1995 to 2000

Getting Better

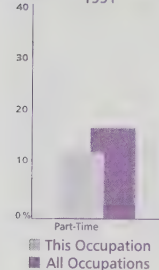
Stable

Getting Worse

How will labour market conditions change in this group?

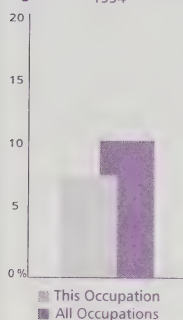
### Type of Employment

1991



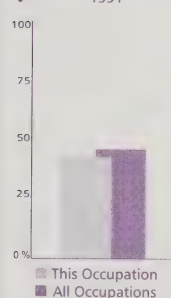
### Unemployment Rates

1994



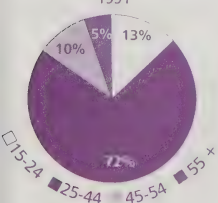
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 5241. Related Code: 524.  
Vol. 2 Field of Study Cross-index: U01, U49, C02, C05, C71.  
For further information, see List of Associations.



# Athletes, Coaches, Referees and Related Occupations

## Full-Time Earnings

1993

\$56,500

\$35,800

\$12,700

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work for professional team organizations, amateur sports teams, sporting commissions, organizations and leagues, community centres, universities, sports and fitness clubs and similar facilities. They may also be self-employed.

- Athletes participate in competitive sports events on an amateur or professional basis. They play team sports such as hockey, baseball and football, or compete in individual sports such as figure skating, track and field and boxing.
- Coaches prepare and train individual athletes and teams for competitive events.
- Sports scouts identify and recruit athletes for professional sports teams.
- Sports officials and referees observe and enforce rules governing sporting events, athletic games and sports competitions.
- Program leaders and instructors in recreation and sport plan and co-ordinate recreational, sports, fitness and athletic programs for individuals and groups.

## Where They Work



## Education, Training and Experience

People in this group usually require ability, experience and technical knowledge of their area of sport.

- Athletes need extensive training under a coach's supervision and may require certification with a particular sports federation.
- Coaches usually need to complete the national coaching certificate program and have technical knowledge of the sport.
- Sports officials require certification and registration with a sport governing agency or commission.
- Referees must complete an officiating program from a sport governing agency.
- Program leaders and instructors usually need a high school diploma as well as a college diploma in recreation or physical education, or extensive experience in a specific recreational or sports program. They usually require certificates such as a swimming instructor's certificate for particular recreational activities.

## About these Occupations

62,000 workers were employed in these occupations in 1994, an increase of 49% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

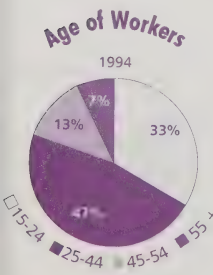
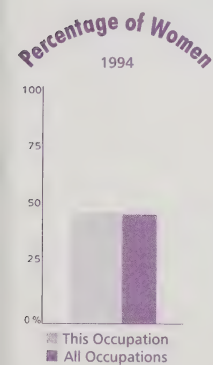
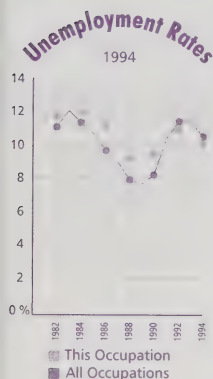
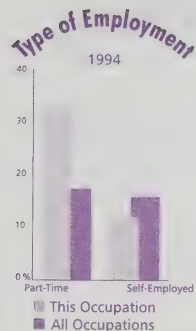
- 85% of these workers are program leaders in recreation.
- 32% work part-time, almost double the average for all occupations.
- Self-employment is somewhat less than the average for all occupations.
- 46% of the workers in these occupations are women, about average.
- The proportion of young workers is double the proportion in the overall work force, indicating these are often low-skill or entry-level jobs.
- The unemployment rate is close to the national rate.
- Full-time earnings are slightly higher than the average for all occupations.
- Employment in these occupations is sensitive to business conditions but is not seasonal.

**Current labour market conditions for this group of occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to worsen from fairly good to poor over the next five years.

- Employment in these occupations will be affected by cost-cutting decisions in the education sector, particularly at the primary and secondary school levels.



See also: This Occupation Code: 525.  
Vol. 2 Field of Study Cross-index: U23, U86, U88, U89.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Sales, Marketing and Advertising Managers

## At Work

People in this occupation work in commercial, industrial and wholesale organizations, marketing and public relations consulting companies and government departments.

- Sales managers plan and direct the activities of sales departments of commercial, industrial, wholesale and other non-retail organizations.
- Marketing managers plan and direct the activities of organizations that develop marketing strategies to promote the sale of products and services. They also establish distribution networks for these products and services.
- Advertising managers plan and direct the activities of organizations that develop and carry out advertising campaigns to promote the sale of products and services.
- Public relations managers plan and direct the activities of organizations that develop and implement communications strategies and information programs, publicize activities and events, and maintain media relations on behalf of clients.

This occupation also includes communications directors, fund raising campaign managers, and media relations, promotions and sales and marketing managers.

## Full-Time Earnings

1993

\$66,600

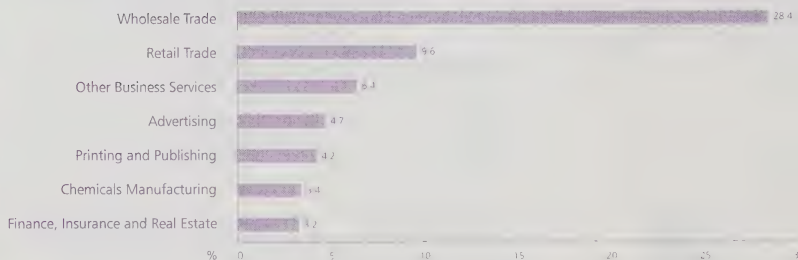
\$41,900

\$17,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These managers require a college diploma or university degree.

- Sales and marketing managers need a college diploma or university degree in business administration or a related field with a sales or marketing specialization and several years' experience as sales and marketing representatives.
- Advertising and public relations managers must have a college diploma or university degree in public relations, communications, marketing, journalism or a related field, and several years' experience as advertising, public relations and communications officers.
- With experience, they may move to senior management positions.

## About this Occupation

92,000 workers were employed in this occupation in 1994, 37% more than in 1984. Employment grew by 17% economy-wide over the same period. Recent employment trends in this occupation are favourable.

- 92% of workers are employed full-time, reflecting the fact that working conditions for managers require standard hours.
- The proportion of self-employment in the occupation is slightly less than the total for all occupations.
- Since 1984, the percentage of women has increased steadily, approaching the national average by 1994.
- There are few young people in the occupation, reflecting the work experience required for managerial positions.
- The unemployment rate is much lower than the national average.
- Full-time earnings are much higher than the national average, reflecting the returns as a result of education and experience, and responsibilities given to managers.
- Employment is somewhat sensitive to economic conditions but not to seasonal factors.

**Current labour market conditions are good in this occupation despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation will remain good through the year 2000.

- Technological change is expected to have an impact on the skill requirements of this occupation due to such applications as local and wide area networks and electronic data interchange. Managers familiar with desktop publishing and external database technologies are also expected to have the best employment opportunities.
- Employment growth for this group is spread over a wide variety of industries, led by wholesale and retail trade and the advertising industry.

## Work Prospects

1995 to 2000

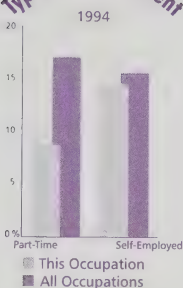
Getting Better

Stable

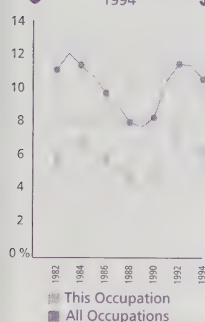
Getting Worse

How will labour market conditions change in this group?

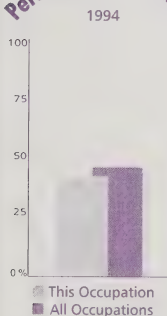
### Type of Employment



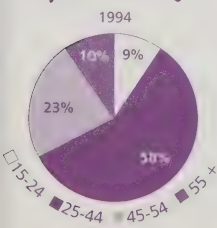
### Unemployment Rates



### Percentage of Women



### Age of Workers



See Also: This Occupation Code: 061.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U86, C14.  
For further information, see List of Associations.





# Managers in Retail Trade

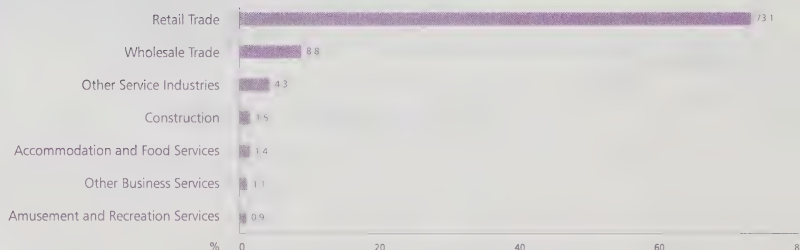
## At Work

People in this occupation work in department and chain stores, travel agencies, supermarkets, car dealerships and other retail organizations. They may own and operate their own retail businesses. Their duties may require them to:

- Plan and direct the operations of organizations engaged in retail sales;
- Manage staff and assign duties;
- Study market research and trends to determine consumer demand, potential sales volumes and the effect of competitors' operations;
- Determine, locate and select merchandise and services to be sold;
- Implement price and credit policies;
- Develop and implement marketing strategies;
- Plan budgets and authorize expenditures; and
- Determine staffing requirements and hire, or oversee hiring of, staff.

This occupation also includes antique dealers, boat dealers and managers of bookstores, car dealerships, clothing stores, department stores, service stations, sporting goods stores, supermarkets, travel agencies and variety stores.

## Where They Work



## Education, Training and Experience

Retail trade managers must have a high school diploma.

- They may require a college diploma or university degree in business administration or in a field related to the product or service sold at their place of work.
- They usually require several years' retail sales experience including some supervisory experience.

## Full-Time Earnings

1993

\$65,700

\$38,100

\$12,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

333,000 workers were employed in this occupation in 1994 — 28% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 86% of workers are employed full-time — about the average for all occupations and much lower than in most managerial occupations.
- The proportion of self-employed workers slightly exceeds the average of all occupations.
- Since 1984, the proportion of women has increased and is now approaching the national average.
- The age distribution in this occupation is close to the national average, in contrast to other management occupations in which there are few young workers.
- The unemployment rate is much lower than the national average.
- Full-time earnings are somewhat higher than the national average but lower than most other managerial occupations.
- Employment in this occupation varies with the economy but is not seasonal.

**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for new workers will remain fairly good through the year 2000.

- Technological change is expected to have an impact on retailing occupations as firms improve their operations through point-of-sale terminals, computerized inventory control, computerized order entry, electronic scanning systems and telecommunication technologies.
- Retail trade is expected to provide over half the new job openings for this occupation over the next five years, with the balance spread over a variety of industries including wholesale trade and business services.

## Work Prospects

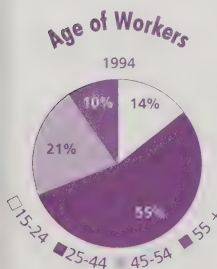
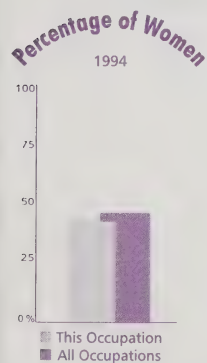
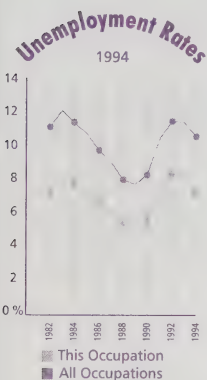
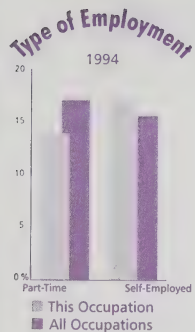
1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



See also: This Occupation Code: 062.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U86, C14.  
For further information, see List of Associations.



# Managers in Food Service and Accommodation

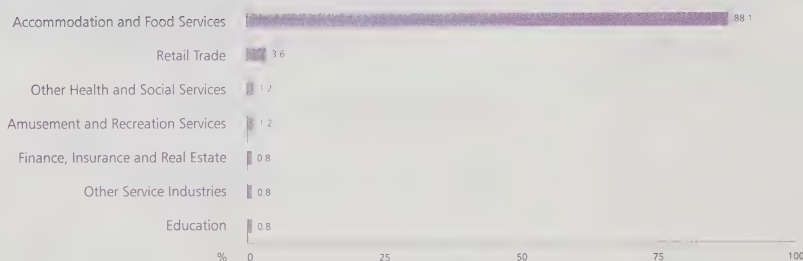
## At Work

These managers work in restaurants, hotels, motels, student residences, resorts, private clubs, bars and other food service and accommodation facilities.

- Restaurant and food service managers plan and direct the operations of restaurants, bars, cafeterias and formal dining rooms. They determine the type of service to be offered, prepare staff schedules, monitor staff performance, and control the costs and inventories of food and beverages. They must be aware of the laws and regulations regarding the sale of alcohol and must ensure that health and safety regulations are followed.
- Accommodation service managers plan and direct the operations of hotels, motels, resorts, student residences and similar organizations or departments within these facilities. They prepare budgets, monitor expenses and schedule and supervise staff.

This occupational group also includes banquet, bar, cafeteria and catering service managers, hotel directors and managers, guest house, tourist home and bed and breakfast operators, and reservations managers.

## Where They Work



## Education, Training and Experience

These managers must have a high school diploma.

- Restaurant and food service managers usually require a college diploma or other program in food and beverage management, hospitality or a related program. They must have several years' experience including supervisory experience.
- Accommodation service managers usually require a college diploma or university degree in hotel management or a related discipline if they are employed by hotel chains or other large organizations. They usually need several years' experience, and this experience may replace formal education.

## Full-Time Earnings

1993

\$61,900

\$35,800

\$11,100

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

124,000 workers were employed in this group in 1994 — 34% more than in 1984. During the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- 80% of this group are managers in restaurants.
- 84% work full-time — about the average for all occupations but lower than most managerial occupations.
- The proportion of self-employed workers is slightly lower than the average for all occupations.
- There were somewhat more women than average in this occupation group, and the proportion has been increasing since 1984.
- There is a high proportion of young workers, in contrast to most management occupations.
- The unemployment rate is below the national average.
- Full-time earnings are only slightly above average and are the lowest of any management occupational group.
- Employment varies with business conditions but is not seasonal.

**Current labour market conditions in this occupational group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupational group will improve over the next five years and will remain fairly good.

- Technological change is expected to have an impact on this group, increasing the skill requirements because of computer reservation systems, inventory control, in-room management systems, in-room check out systems and property management systems.
- The accommodation and food service industry will continue to be the centre of employment for this group, with strong job growth expected over the next five years.

## Work Prospects

1995 to 2000

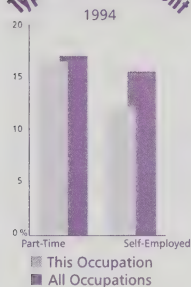
Getting Better

Stable

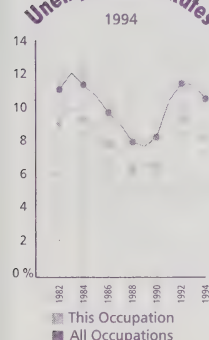
Getting Worse

How will labour market conditions change in this group?

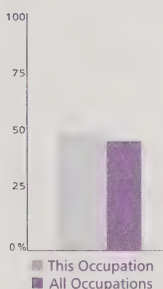
### Type of Employment



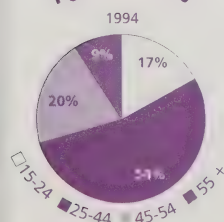
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 063.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U86, T81.  
For further information, see List of Associations.





# Managers in Other Services

## At Work

These services managers work for organizations that provide services such as dry cleaning, hairdressing, and commercial, industrial and residential cleaning, and schools that provide instruction in activities such as driving, language, music, cooking and dance. Their duties may require them to:

- Plan and direct the operations at their places of business;
- Establish or implement policies and procedures for staff;
- Plan and control budgets and inventories;
- Respond to questions and complaints and resolve problems;
- Manage contracts for advertising and marketing strategies; and
- Hire, train and supervise staff.

## Where They Work



## Education, Training and Experience

These managers usually require a high school diploma.

- They may need a college diploma or, if they are managing a school, a vocational certificate in their course of instruction.
- They usually need one-to-three-years' experience.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

37,000 workers were employed in this occupation in 1994 — 22% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 80% of these managers are employed full-time, reflecting working conditions which require managers to keep standard hours.
- The proportion of self-employed workers somewhat exceeds the average of all occupations.
- Women make up 51% of these managers, a proportion slightly greater than the average for all occupations.
- The age distribution of this occupation is similar to the age distribution for all occupations.
- The unemployment rate for these managers is lower than the national average.
- Full-time earnings are slightly below average levels and are the lowest for any group of managers.
- Employment in this occupation varies moderately with economic conditions and is not seasonal.

**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation will remain fairly good through the year 2000.

- Technological change is expected to affect these management occupations as firms improve their operations through point-of-sale terminals, computerized inventory control, computerized order entry, electronic scanning systems and telecommunication technologies.
- Employment opportunities are expected to be centred in the area of personal and household services, although employment growth is distributed across most industries.

## Work Prospects

1995 to 2000

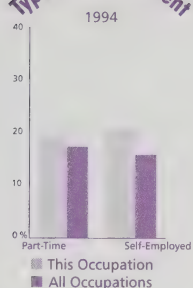
Getting Better

Stable

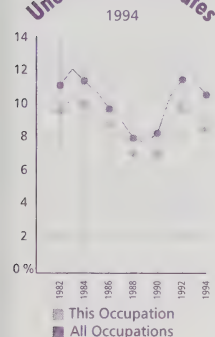
Getting Worse

How will labour market conditions change in this group?

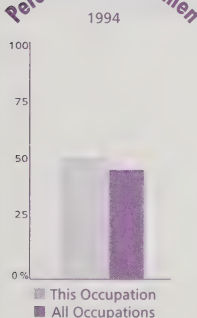
### Type of Employment



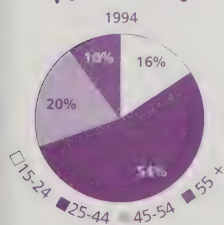
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 065.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U86, C14.  
For further information, see List of Associations.



# Sales and Service Supervisors

## At Work

These people work in retail organizations, telephone and door-to-door sales, hospitals and other health care institutions, cafeterias, catering companies and other food service facilities, dry cleaners, laundries, hotels, schools, cleaning companies, office buildings and other service organizations in the private sector and government. Their duties may require them to:

- Supervise, co-ordinate and schedule activities of staff;
- Establish and implement procedures;
- Co-ordinate work with that of other departments;
- Estimate and order materials and supplies;
- Monitor quality and production levels;
- Resolve work-related problems and prepare and submit budget, progress and other reports;
- Maintain inventory and records; and
- Hire and train staff.

This occupational group also includes dry cleaning, laundry and cleaning supervisors, executive housekeepers and supervisors of workers such as hotel clerks, theatre ushers and attendants, reservation clerks, commissionaires and sport and recreation club workers.

## Where They Work



## Education, Training and Experience

People in this group usually need a high school diploma and previous experience in their area of work.

- Food service supervisors require a college diploma in food service administration, hotel and restaurant management or a related discipline, or several years' experience in food preparation and service.
- Executive housekeepers usually require a college diploma or university degree in hospital or hotel management or business administration. They may substitute extensive experience as a cleaning supervisor for educational requirements.

## Full-Time Earnings

1993

\$48,000

\$29,100

\$12,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

84,000 workers were employed in these occupations in 1994, an increase of 19% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- 46% are supervisors in retail trade, and 23% are cleaning supervisors.
- 25% of these workers are employed part-time, significantly higher than the average for all occupations.
- Self-employment is about the same as the average for all occupations.
- Women are make up 49% of the workers in these occupations, slightly above the average for all occupations.
- There are many young workers relative to the overall work force, indicating these are often low-skill jobs.
- The unemployment rate is close to the national rate.
- Full-time earnings are well below average levels.
- Employment in these occupations is sensitive to business conditions but is not seasonal.

**Current labour market conditions for this group of occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain fairly good through the year 2000.

- The widespread use of computerized inventory control and order-entry systems will require those working in these occupations to upgrade their skills.
- Retail and wholesale trade, accommodation services and other services are expected to provide strong job growth for this group. Little job growth is expected for service supervisor occupations in hospitals or educational institutions.

## Work Prospects

1995 to 2000

Getting Better

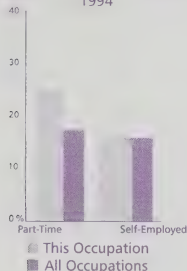
Stable

Getting Worse

How will labour market conditions change in this group?

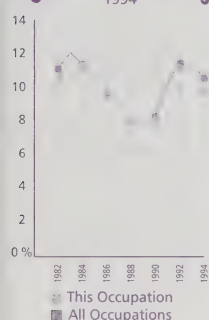
### Type of Employment

1994



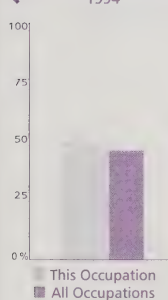
### Unemployment Rates

1994



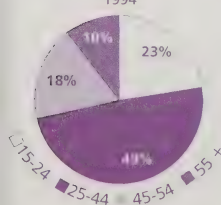
### Percentage of Women

1994



### Age of Workers

1994



See also: This Occupation Code: 621.  
Vol. 2 Field of Study Cross-index: U11, U81, U86, C14, T81.  
For further information, see List of Associations.





# Technical Sales Specialists, Wholesale Trade

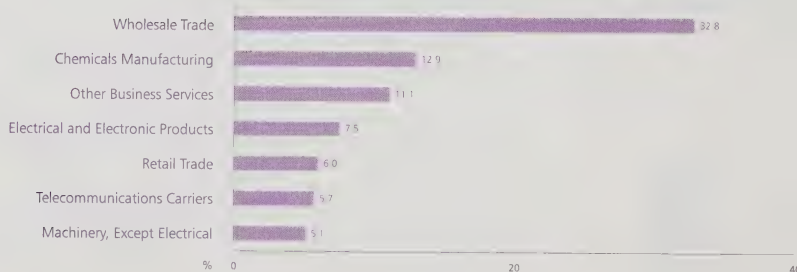
## At Work

Technical sales specialists work for pharmaceutical companies, industrial equipment manufacturing companies, computer services and engineering firms, hydro-electric companies, and other organizations that produce and provide technical goods and services. They may specialize in selling scientific and industrial products, telecommunication and computer services and other particular products or services. Their job duties may require them to:

- Promote sales to existing clients, and identify and solicit potential clients;
- Assess the needs and resources of clients and recommend appropriate goods and services;
- Provide input into product design where goods or services must meet clients' specific needs;
- Develop reports and proposals and deliver presentations;
- Estimate costs of installation and maintenance of equipment and service; and
- Prepare and administer sales contracts.

This occupation also includes representatives in sales of aircraft, communication equipment, construction equipment, heavy duty equipment, electricity and medical instrumentation.

## Where They Work



## Education, Training and Experience

Technical sales specialists must have a high school diploma.

- They usually require a college diploma or university degree in a program related to the product and service they sell.
- They may need experience in sales or in a technical occupation related to the product and service they sell.
- Technical sales supervisors need experience as a technical sales specialist.
- With additional training or experience, they may move into sales management positions.

## Full-Time Earnings

1993

\$49,100

\$34,900

\$15,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

60,000 workers were employed in this occupation in 1994, an increase of 20% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- One quarter of these workers are employed part-time, more than the average for all occupations.
- Almost a quarter are self-employed, well above the average of all occupations.
- Women make up 46% of these workers, about average.
- The unemployment rate is well below the average for all occupations.
- Full-time earnings are somewhat below average levels.
- Employment in this occupation is somewhat sensitive to business conditions but is not seasonal.

**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to improve over the next five years but remain fairly good.

- Rapid technological change means those working in this occupation must stay abreast of ever-changing product lines available on the market.
- Other business services, chemical products and electric and electronic products are expected to be the industries with job growth for this occupation over the next five years. Employment is also expected to grow in wholesale trade but at a slower rate.

## Work Prospects

1995 to 2000

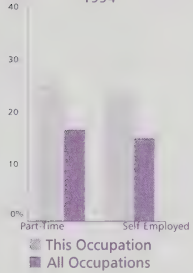
Getting Better

Stable

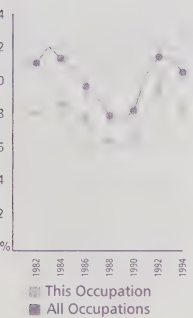
Getting Worse

How will labour market conditions change in this group?

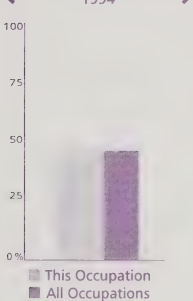
### Type of Employment



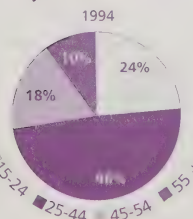
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 622.  
Vol. 2 Field of Study Cross-index: U11, U43, U81, C14, C16.  
For further information, see List of Associations.



# Insurance and Real Estate Sales Occupations and Buyers

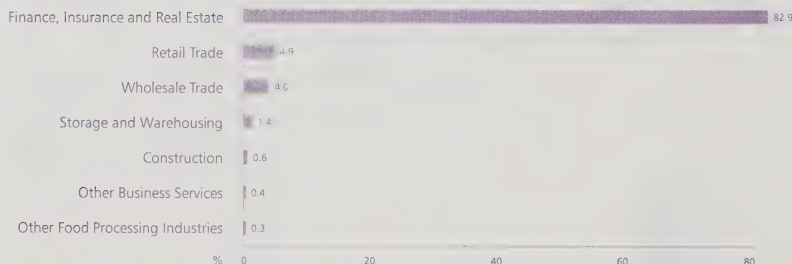
## At Work

People in this group work for insurance companies and brokerage firms, real estate companies, retail and wholesale organizations and licensed grain elevator companies.

- Insurance agents and brokers sell automobile, fire, life, property, marine, aircraft and other types of insurance to businesses and individuals.
- Real estate agents and salespersons act as agents for the sale and purchase of houses, apartments, commercial buildings, land and other real estate. They may rent and lease properties on behalf of clients.
- Retail and wholesale buyers purchase merchandise for resale by retail and wholesale organizations, and are usually responsible for the merchandising operations of retail organizations. They may specialize in particular merchandise lines.
- Grain elevator operators purchase grain from farmers, determine the grade, quality and weight of grain delivered, and maintain records for farmers, companies and the Canadian Wheat Board.

This occupational group also includes real estate brokers, chief and senior buyers, merchandisers, and assistant and district grain elevator managers.

## Where They Work



## Education, Training and Experience

People in this group require a high school diploma.

- They usually require college, university or specialized training in their area of work.
- Grain elevator operators require several years' experience working in a grain elevator and may require a pesticide licence. They receive on-the-job training.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

156,000 workers were employed in these occupations in 1994, an increase of 39% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are highly favourable.

- 49% are real estate agents, and 36% are insurance agents and brokers.
- 11% of workers in these occupations are employed part-time, less than the average for all occupations.
- 30% are self-employed, about twice the average for all occupations.
- Women make up 43% of the workers in these occupations, about average.
- There are few young workers in these occupations compared to the overall work force.
- The unemployment rate for this group is well below the national rate.
- Full-time earnings are slightly above average levels.
- Employment in these occupations is sensitive to business conditions but is not seasonal.

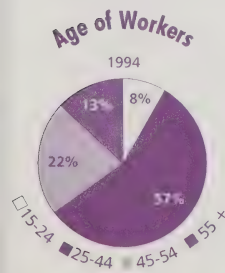
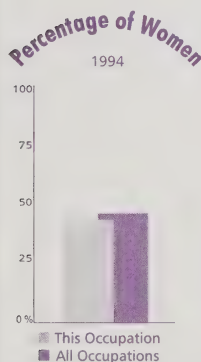
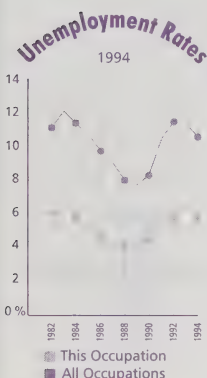
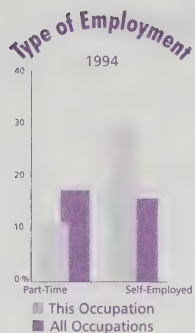
**Current labour market conditions for this group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain good through to the year 2000.

- Increasing use of computer-based technologies will affect the work of persons employed in all of these occupations.
- Employment is concentrated in the finance, insurance and real estate sector which is expected to generate strong job growth for this group over the next five years. Smaller contributions to job growth are expected from the wholesale and retail trade industries.

**See also:** This Occupation Code: 623. Related Codes: 6231, 6232, 6233. Vol. 2 Field of Study Cross-index: U11, U43, U81, U85, C16. For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





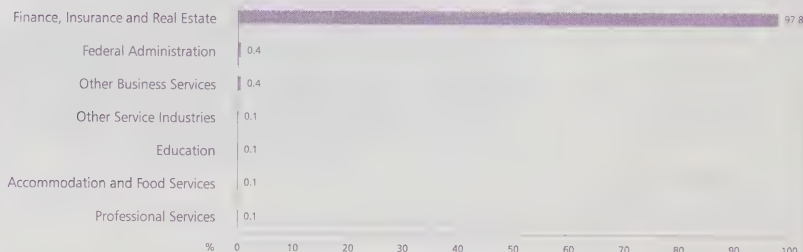
# Insurance Agents and Brokers

## At Work

Insurance agents work for individual insurance companies to sell that company's products to clients. Insurance brokers work for brokerage firms and find appropriate insurance products through several insurance companies on behalf of clients. Their duties may require them to:

- Sell automobile, fire, health, life, property, marine, aircraft and other types of insurance to clients;
- Establish clients' insurance coverage, premiums and methods of payment;
- Provide information on group and individual insurance packages such as risk coverage, benefits and other policy features;
- Ensure that clients provide the appropriate forms, medical examinations and other policy requirements; and
- Respond to clients' questions when claims are made.

## Where They Work



## Education, Training and Experience

People in this occupation must complete high school, on-the-job training and industry-sponsored courses and training programs.

- They must be licensed by the superintendent of insurance in their province or territory.
- They can receive professional recognition as an associate or fellow of the Insurance Institute of Canada by completing educational programs provided by the Institute or its provincial counterparts.
- With experience, they may progress to insurance management positions.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,300 is the average for all occupations.

## About this Occupation

56,000 workers were employed in this occupation in 1994, an increase of 42% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 9% work part-time in this occupation, about half the average for all occupations.
- Women make up 40% of the workers in this occupation, somewhat below the average for all occupations.
- There are few young workers in this occupation.
- The unemployment rate is about half the national rate.
- Full-time earnings are slightly above average for all occupations.
- Employment in this occupation is sensitive to changing economic conditions but is not seasonal.

**Current labour market conditions for this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain good through the year 2000.

- The insurance sector of the economy is likely to step in as governments get out of such areas as health insurance, creating employment opportunities in this occupation.
- Expert systems will be used increasingly in the insurance industry, and computerized telecommunications will link brokerages to insurance firms. Insurance agents and brokers will need to develop strong computer skills to exploit these technologies.
- Almost all employment for this occupation is in the finance, insurance and real estate sector, which is expected to register strong job growth for these workers over the next five years.

## Work Prospects

1995 to 2000

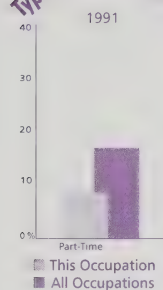
**Getting Better**

**Stable**

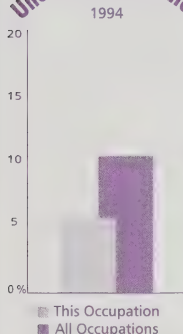
**Getting Worse**

How will labour market conditions change in this group?

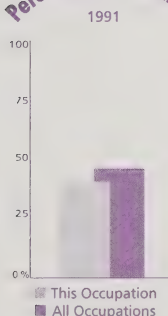
### Type of Employment



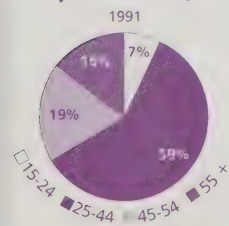
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 6231. Related Code: 623.  
Vol. 2 Field of Study Cross-index: U11, U89, C14.  
For further information, see List of Associations.

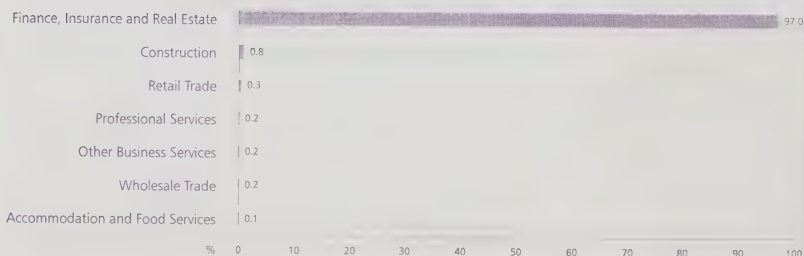
# Real Estate Agents and Salespersons

## At Work

People in this occupation work in the real estate industry, normally on a commission basis. Their duties may require them to:

- Assist individuals and companies in the sale and purchase of houses, apartments, commercial buildings, land and other real estate;
- Solicit property listings from prospective sellers;
- Assist sellers by establishing asking price, advertising the property, listing the property with multiple listing services and conducting open houses for prospective buyers;
- Assist buyers in selecting, visiting, inspecting and making offers of purchase on real estate;
- Advise sellers and buyers on market conditions, prices, mortgages, legal requirements and related matters;
- Draw up sales agreements for approval of sellers and buyers; and
- Rent or lease properties on behalf of clients.

## Where They Work



## Education, Training and Experience

People in this occupation must complete high school and a real estate training course.

- They require a provincial licence in their province.
- They may operate independently by obtaining a broker's licence according to the regulations in their province. A broker's licence is necessary to become a real estate manager.

## Full-Time Earnings

1993

\$75,300

\$34,900

\$9,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

77,000 workers were employed in this occupation in 1994, an increase of 47% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 12% work on a part-time basis, over half the average for all occupations.
- 42% of the workers are women, about average for all occupations.
- There are few young workers in this occupation relative to the overall work force.
- The unemployment rate is about half the national rate.
- Full-time earnings are slightly above the average for all occupations.
- Employment in this occupation is sensitive to changing economic conditions but is not seasonal.

**Current labour market conditions for this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain good through the year 2000.

- Computer-based technologies will become increasingly common in this field, including laptop computers linked with the central office and used to show properties to clients. Those who fail to adapt to these new technologies may find it difficult to work in this occupation.
- Employment is concentrated in the finance, insurance and real estate sector, which is expected to provide strong job growth for this group over the next five years.

## Work Prospects

1995 to 2000

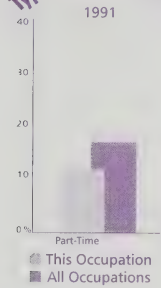
Getting Better

Stable

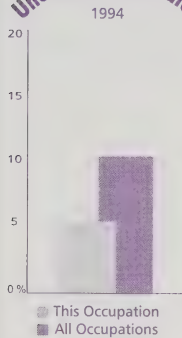
Getting Worse

How will labour market conditions change in this group?

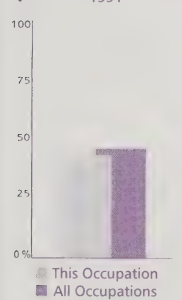
### Type of Employment



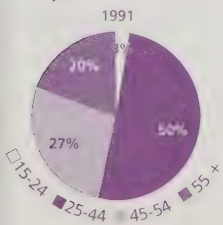
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 6232. Related Code: 623.  
Vol. 2 Field of Study Cross-index: U11, U23, U45, U84.  
For further information, see List of Associations.





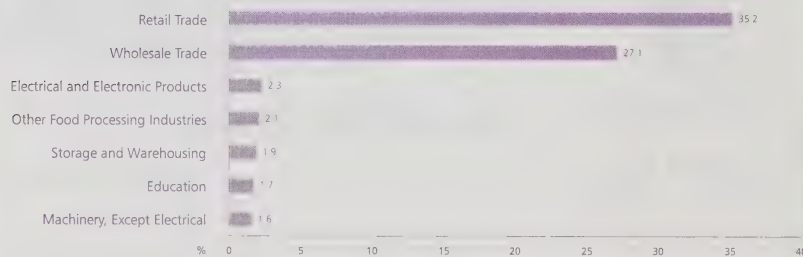
# Retail and Wholesale Buyers

## At Work

People in this occupation work for retail and wholesale organizations. Their duties may require them to:

- Purchase merchandise from suppliers such as manufacturers, importers and brokers for sale in retail and wholesale organizations;
- Review requirements of their organizations and determine the quantity and type of merchandise to purchase;
- Study market reports, trade periodicals and sales promotion materials and visit trade shows, showrooms, factories and product design events;
- Establish and maintain contact with suppliers and negotiate prices, discounts, credit terms and transportation arrangements with them;
- Oversee distribution of merchandise to outlets and maintain stock levels; and
- Supervise the work of other buyers.

## Where They Work



## Education, Training and Experience

People in this occupation usually must complete high school and have a university degree or college diploma in business, marketing or a related program.

- They must have experience as sales supervisors or sales representatives.
- Supervisors and senior buyers must have experience.
- They may specialize in a particular merchandise line through experience or product-based training courses.
- With additional experience or training, they may progress to managerial positions.

## Full-Time Earnings

1993

\$50,200

\$32,500

\$16,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

21,000 workers were employed in this occupation in 1994, an increase of 11% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 95% work full-time.
- Women make up 38% of the workers in this occupation, somewhat below average for all occupations.
- There are few young workers in this occupation, due to the experience these jobs require.
- The unemployment rate is somewhat below the national rate.
- Full-time earnings are slightly below the average for all occupations.
- Employment in these occupations is sensitive to economic conditions but is not seasonal.

**Current labour market conditions for this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain fairly good through the year 2000.

- Computers linked to the central office and to suppliers will be used increasingly to place orders to various suppliers.
- This occupation is expected to experience moderate job growth in retail and wholesale trade over the next five years. Other industries which are expected to increase employment include electric and electronic products, clothing and business services.

## Work Prospects

1995 to 2000

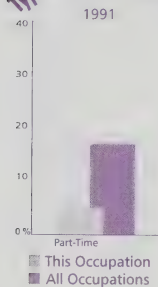
Getting Better

Stable

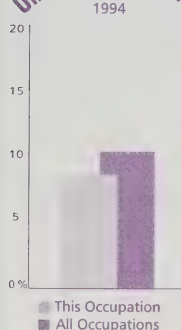
Getting Worse

How will labour market conditions change in this group?

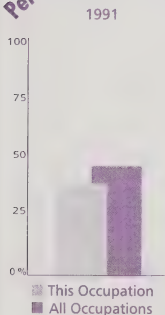
### Type of Employment



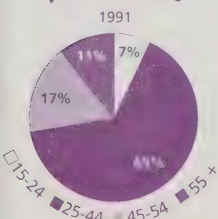
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 6233. Related Code: 623.  
Vol. 2 Field of Study Cross-index: U11, U81, C13, C14, C16.  
For further information, see List of Associations.



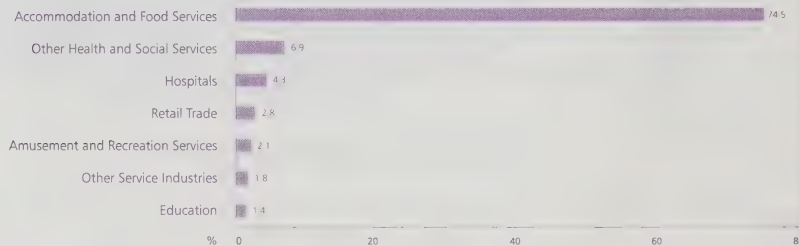
# Chefs and Cooks

## At Work

Chefs and cooks work in restaurants, hotels, hospitals, educational institutions, central food commissaries, ships, construction and logging camps and other organizations.

- Executive chefs direct food preparation in one or more restaurant chains and other establishments. They plan menus, hire and supervise chefs and cooks and may prepare meals.
- Sous-chefs supervise chefs, cooks, specialist chefs and other kitchen workers. They may plan menus and prepare meals.
- Working chefs prepare meals or specialize in pastry, sauces, salads, meats and other foods. They may also supervise kitchen staff and plan menus.
- Cooks prepare a variety of foods, including short-orders, and supervise kitchen workers. They may plan menus and specialize in ethnic cuisine or speciality dishes.

## Where They Work



## Education, Training and Experience

People in this group usually complete high school.

- Cooks must complete a three-year apprenticeship, or a college or other program in cooking, or several years' commercial cooking experience.
- Cook trade qualification is available in all provinces except Quebec, the Northwest Territories and the Yukon.
- Supervising chefs, sous-chefs, chefs and working chefs require a cook apprenticeship or formal training abroad or equivalent training and experience.
- Supervisors and administrators usually require several years' experience including two years' supervisory experience in commercial food preparation, and experience as a chef.
- Sous-chefs, working chefs and chefs usually require several years' experience in commercial food preparation.
- The admission certification program for more highly skilled chefs and cooks is administered by the Canadian Culinary Association through the Canadian Federation of Chefs and Cooks.

## Full-Time Earnings

1993

\$35,700

\$21,200

\$8,600

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

184,000 people were employed as chefs and cooks in 1994. Employment was up 25% in this occupational group over the 1984-94 period while total employment rose by 17% economy-wide. Recent employment trends in these occupations are highly favourable.

- 90% of these workers are cooks.
- 38% are employed part-time — more than twice the average for the entire labour force.
- Self-employment is well below the average of all occupations.
- 60% of chefs and cooks are women, although the proportion has declined somewhat over the last decade.
- An extremely high number of chefs and cooks are young people, with almost 40% between 15 and 24 years old. This reflects the low skill and entry-level nature of many of the jobs in this occupational group.
- The unemployment rate for chefs and cooks is significantly above the national level.
- Full-time earnings for cooks and chefs are about 60% of the national average, among the lowest for specialized sales and service occupations.
- Employment in this group is sensitive to business conditions and is somewhat seasonal.

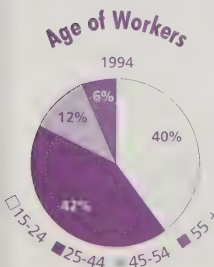
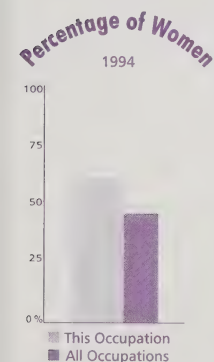
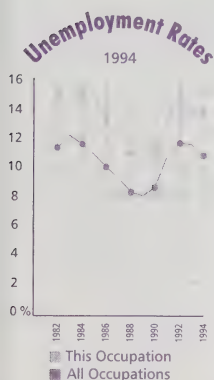
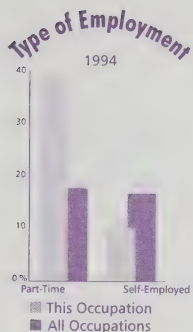
**Current labour market conditions for cooks and chefs are poor.**

## Looking to the Year 2000

Labour market conditions for chefs and cooks will improve from poor to fairly good over the next five years.

- A large number of young people with relatively little education and few job skills will be seeking employment as cooks and chefs. This suggests that job turnover will remain high and competition for new jobs will remain intense.
- The accommodation and food industry, as the largest employer for workers in this group, is expected to generate most of the job growth for this group over the next five years. Strong growth is also expected from the amusement and recreation sectors.

See also: This Occupation Code: 624.  
Vol. 2 Field of Study Cross-index: C13, T81, T83.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Butchers and Bakers

## At Work

People in this occupational group work in supermarkets, grocery stores, butcher shops, fish stores, bakeries, hotels and restaurants. They may also be self-employed.

- Butchers and meat cutters cut, trim and otherwise prepare and display standard cuts of meat, poultry, fish and shellfish for sale at self-serve counters or directly to customers. They may supervise other butchers and meat cutters and accept customers' payments.
- Bakers prepare and bake bread, rolls, pies, sweet goods, muffins and other items, and frost and decorate cakes. They also purchase supplies, draw up production schedules, hire and train personnel, and may supervise bakery and sales staff.

## Full-Time Earnings

1993

\$43,800

\$25,100

\$12,200

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group usually require a high school diploma.

- Butchers and meat cutters may need a college or other program in meat cutting. Food stores usually provide on-the-job training.
- Trade certification for butchers and meat cutters is available, but voluntary, in British Columbia.
- Bakers must usually complete a three-to-four-year apprenticeship program or a college or other program for bakers. On-the-job training may be provided.
- Trade certification for bakers is available, but voluntary, in Prince Edward Island, Ontario, Alberta, the Northwest Territories, British Columbia and Yukon. Qualified bakers may also obtain interprovincial trade certification (Red Seal) for job mobility throughout the country.

## About these Occupations

59,000 people were employed as butchers and bakers in 1994. Employment in this occupational group increased by only 5% over the 1984-94 period while economy-wide employment rose by 17%. Recent employment trends in this group are unfavourable.

- Workers are evenly split between the occupation of butcher and that of baker.
- A slightly smaller than average proportion of these workers is employed part-time.
- Self-employment is less than half the average of all occupations.
- 36% of butchers and bakers are women, significantly below the national average.
- There is an above average proportion of young workers, reflecting the low skill and the entry-level nature of many of the jobs in these occupations.
- The unemployment rate for butchers and bakers is well above the national average.
- Full-time earnings for butchers and bakers are about four fifths of the average.
- Employment is sensitive to overall business conditions but is not seasonal.

**Current labour market conditions for butchers and bakers are poor.**

## Looking to the Year 2000

Labour market conditions for butchers and bakers will improve somewhat over the next five years, but remain poor.

- Competition for jobs will likely remain intense.
- Retail trade is expected to be the mainstay of job generation for this group over the next five years. Strong employment growth is also expected from industries that employ a smaller share of workers, such as other food processing industries, wholesale trade and accommodation and food service.

## Work Prospects

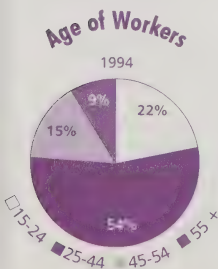
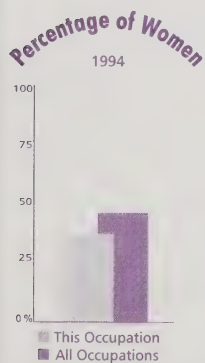
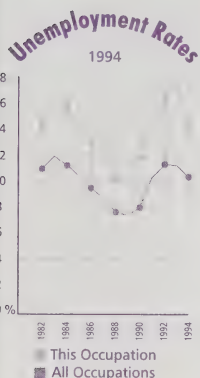
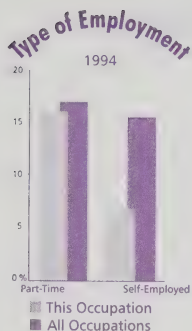
1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



See also: This Occupation Code: 625.  
Vol. 2 Field of Study Cross-index: T81, T82.  
For further information, see List of Associations.



# Police Officers and Firefighters

## At Work

People in this group are employed by governments, the Canadian forces and industrial organizations with internal firefighting services.

- Police officers (except commissioned) patrol assigned areas to maintain public safety and order and enforce laws and regulations. They investigate crimes and accidents, arrest criminal suspects and participate in crime prevention, public information, safety programs and other activities. They may supervise and co-ordinate the work of other police officers.
- Firefighters control and extinguish fires using aerial ladders, hydraulic, manual and other equipment. They rescue victims from burning buildings and industrial, automobile and other accidents, and administer medical aid and other assistance. They also educate the public on fire prevention and monitor prevention through inspections. Fire officers such as captains and lieutenants supervise and co-ordinate the work of other firefighters.

This occupational group includes Ports Canada police, military and railway police as well as municipal, industrial, airport and wild-land firefighters.

## Full-Time Earnings

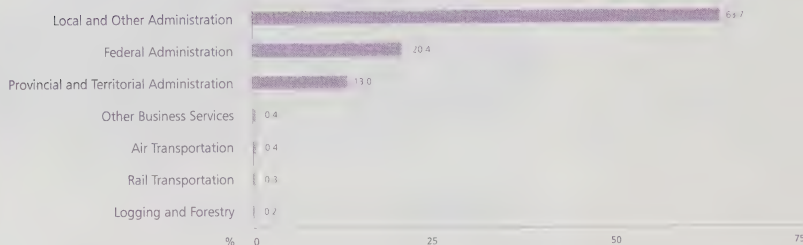
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group must meet physical agility, strength, fitness and vision requirements.

- Police officers must complete high school and may require a university degree or college program in law and security or the social sciences. Their employers provide a three-to-six-month training program.
- Police detectives and sergeants must have previous experience as constables.
- With additional training and experience, police officers may progress to commissioned police officer positions.
- Firefighters must usually complete high school and may require a college program in fire protection technology or a related field. A firefighter basic training course is usually provided by the employer. Fire officers such as captains and lieutenants must have several years' experience and related training.
- With additional training and experience, firefighters may progress to senior positions such as fire chief.

## About these Occupations

61,000 people worked as police officers and firefighters in 1994. Employment in this occupational group rose by 14% over the 1984-94 period, while economy-wide employment increased by 17%. Recent employment trends in these occupations are unfavourable.

- 70% of these workers are police officers and 30% are firefighters.
- Part-time employment is slightly lower than average.
- There is virtually no self-employment in this occupational group.
- Only 19% of police officers and firefighters are women, although the proportion of women has increased significantly over the last decade.
- The age distribution of police officers and firefighters is similar to the overall work force.
- The unemployment rate for police officers and firefighters is significantly below the national average.
- Full-time earnings for police officers and firefighters are above the national average for all occupations and are the highest for any specialized sales or service occupation.
- Employment of police officers and firefighters is moderately responsive to business conditions and somewhat seasonal.

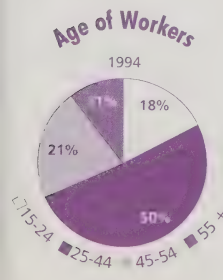
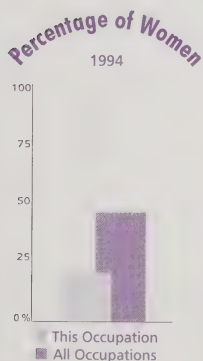
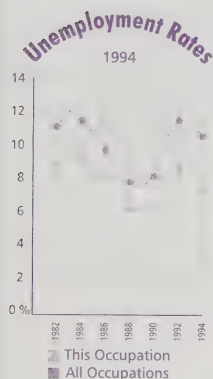
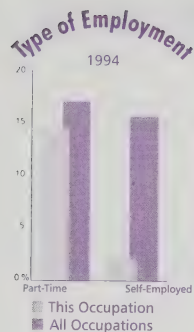
**Current labour market conditions for police officers and firefighters are good.**

## Looking to the Year 2000

Labour market conditions for police officers and firefighters are expected to worsen from good to fairly good over the next five years.

- Most demand for police officers and firefighters will be to replace people leaving the professions. New positions in these occupations will be scarce.
- Declines in employment are expected across all levels of government, federal, provincial and local, the largest employers for this group. In the private sector, other business services are also expected to employ fewer workers from this group.

**See also:** This Occupation Code: 626.  
Vol. 2 Field of Study Cross-index: U86, U89, C62, C81.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

**How will labour market conditions change in this group?**





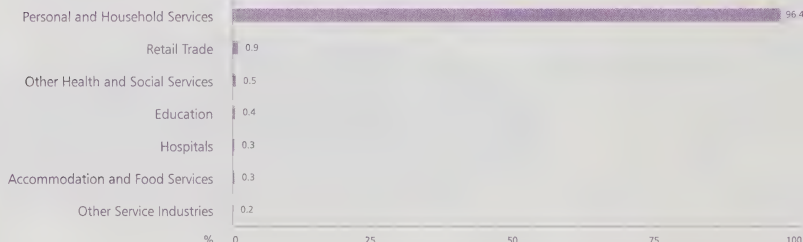
# Technical Occupations in Personal Service

## At Work

People in this group usually work in hairstyling salons, barber shops, vocational schools, hair replacement clinics, health care, theatre, film and television companies, and funeral homes.

- Hairstylists style, cut, curl and perm hair and apply other hair and scalp treatments.
- Barbers cut and trim hair, and shave and style beards and moustaches. They may also wave or tint hair and provide other hair and scalp treatments.
- Funeral directors consult with the family of the deceased regarding arrangement and costs of the funeral service and co-ordinate all aspects of the funeral.
- Embalmers preserve and prepare human bodies for funeral services, including performing cosmetic and restorative work.

## Where They Work



## Education, Training and Experience

People in this group must complete at least some high school.

- Hairstylists usually require a two-to-three-year apprenticeship, or college or other hairstyling program combined with on-the-job training. Certification and licences vary across the country.
- Barbers usually need a two-year apprenticeship or other barber training program. On-the-job training may replace formal education. Certification and licences vary across the country.
- Funeral directors must usually complete high school, take a year of training with a licensed funeral director and pass a qualifying exam. They must have licences in all provinces except Prince Edward Island and British Columbia. They must usually also be licensed as embalmers in all provinces except Prince Edward Island, Saskatchewan and British Columbia.
- Embalmers usually complete high school, a two-year apprenticeship and pass a qualifying exam. They require licences in all provinces except British Columbia.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$24,900 is the average for all occupations.

## About these Occupations

106,000 people were employed in technical personal service occupations in 1994. Employment increased by 26% over the 1984-94 period while economy-wide employment rose by 17%. Recent employment trends in these occupations are favourable.

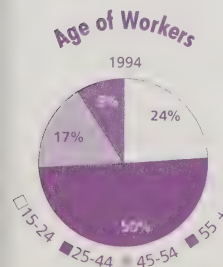
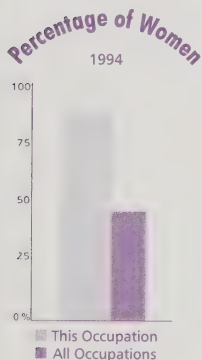
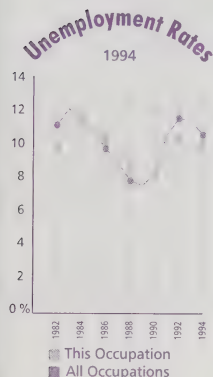
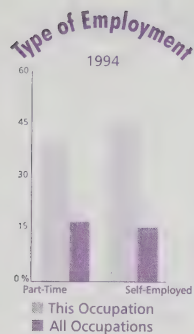
- 96% of workers in this group are hairstylists and barbers.
- 38% of these workers are employed part-time — more than double the national average.
- 46% are self-employed — three times the national average for all occupations.
- Almost 90% of these workers are women.
- 24% of these workers are between 15 and 24 years old, well above average. This reflects the low skill and entry-level nature of most employment in this occupational group.
- The unemployment rate for this occupational group is slightly below the national average.
- Full-time earnings for these personal service occupations are half the national average, the lowest of any group.
- Employment in these occupations is moderately sensitive to overall business conditions but is not seasonal.

**Current labour market conditions in these occupations are fairly good despite some weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain fairly good through the year 2000.

- High turnover in these occupations means that most job openings will be to replace people leaving their jobs. School-leavers seeking to enter these occupations will find intense competition from experienced workers.
- Almost all job growth is expected to be in the personal and household service industry, which is expected to experience modest growth in demand for workers in this group over the next five years.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?

See also: This Occupation Code: 627.  
Vol. 2 Field of Study Cross-index: U86, C21, C84, T05.  
For further information, see List of Associations.



# Sales Representatives, Wholesale Trade

## At Work

These sales representatives work for wholesalers and for organizations such as petroleum companies, food, beverage and tobacco producers, clothing manufacturers, motor vehicles and parts manufacturers, hotels, business services firms and transportation companies. Their duties may require them to:

- Promote sales of non-technical goods and services to retail, wholesale, commercial, industrial and professional clients;
- Deliver presentations to clients regarding the benefits and uses of the goods and services;
- Estimate and quote prices, credit terms, warranties and delivery dates;
- Prepare or supervise the preparation of contracts;
- Consult with clients after sales to resolve problems and provide support; and
- Review and respond to information regarding product innovations, competitors and market conditions.

This occupation also includes freight sales agents, food products sales representatives, oil distributors, periodicals and magazine sales representatives, hotel accommodations sales executives, security services sales consultants and graphic design sales representatives.

## Full-Time Earnings

1993

\$49,800

\$34,900

\$14,800

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These sales representatives must have a high school diploma.

- They may require a college diploma or university degree.
- They usually need experience in sales or in an occupation related to the product or service they are selling.
- With additional training or experience, they may progress to sales management positions.

## About this Occupation

143,000 workers were employed as sales representatives for wholesale trade in 1994. Employment in this occupation grew about 21% between 1984 and 1994, while employment rose by 17% economy-wide over the same period. Recent employment trends in this occupation are favourable.

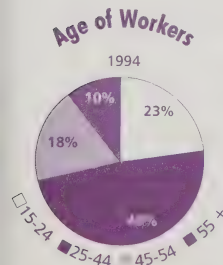
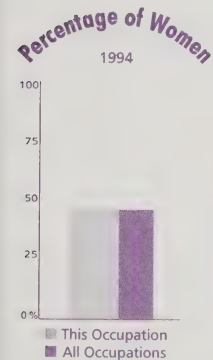
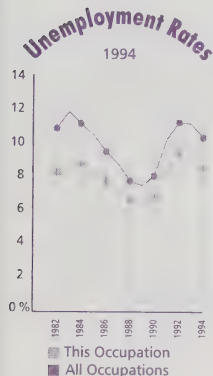
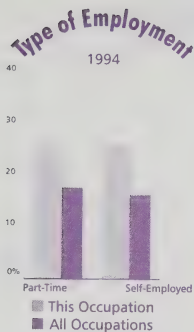
- 24% of those employed in these occupations work part-time, considerably above the national average.
- 25% of wholesale representatives are self-employed — well above the average of all occupations.
- The proportion of women in this occupation is the same as the average in all occupations.
- This occupation has a high proportion of young workers, reflecting the low-skill, entry-level nature of many of these jobs.
- The unemployment rate for this occupation is below the national rate.
- Full-time earnings of wholesale sales representatives are somewhat below average levels but are among the highest for semiskilled sales and service occupations.
- Employment of these sales representatives is moderately sensitive to overall business activity and is not seasonal.

**Current labour market conditions for wholesale sales representatives are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for this occupation will improve somewhat over the next five years but remain fairly good.

- Much of employer demand will be to replace sales workers who leave their existing jobs. Job seekers with previous experience in sales have a competitive edge in finding positions.
- Most job growth is expected to be in the wholesale trade industry, although almost all industries require employees from this occupation.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also:

This Occupation Code: 641.  
Vol. 2 Field of Study Cross-index: U11, U43, U81, C14, C16.  
For further information, see List of Associations.





# Retail Salespersons and Sales Clerks

## Full-Time Earnings

1993

\$57,600

\$34,900

\$10,700

## Highest, Average and Lowest\*

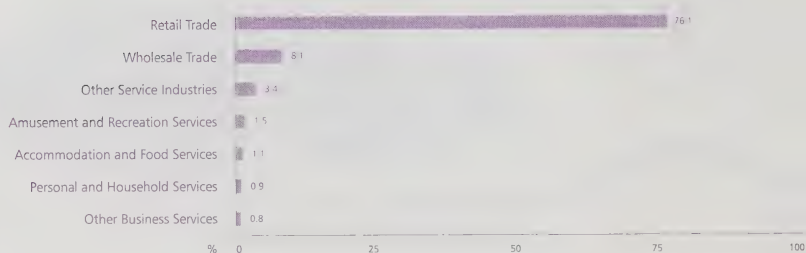
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this occupational group work in a wide variety of retail stores and wholesale businesses that sell on a retail basis to the general public. Their duties may require them to:

- Assist customers with purchases of merchandise or rental arrangements;
- Provide information and advice on merchandise;
- Estimate and quote prices, credit terms, trade-in allowances, warranties and delivery dates;
- Prepare sales contracts, accept cash, cheques, credit cards and automatic debit payments;
- Assist in the display of merchandise and other activities; and
- Maintain sales records for inventory control.

## Where They Work



## Education, Training and Experience

People in this group may be required to have a high school diploma. Those in the clothing, footwear, home furnishing and music sectors must be experienced and well educated. They must also be aware of the latest fashions and trends, especially when dealing with young people.

- Retail salespersons are usually required to demonstrate sales ability and product knowledge when selling complex or valuable merchandise such as automobiles, antiques and computers.
- They must be able to work with computers and be prepared to perform such tasks as inventory record keeping, inventory restocking and reordering, and reporting sales trends among products.
- With experience and additional training, people in this group may progress to retail supervisory positions.

## About these Occupations

579,000 people were employed as retail salespersons and sales clerks in 1994, representing over 4% of total employment in Canada. Employment rose by 17% in this occupational group over the 1984-94 period, the same increase as for total employment. Recent employment trends in these occupations are favourable.

- 29% are employed part-time, almost double the national average.
- Self-employment is significantly more prevalent than average.
- Almost half of all salespersons are women, slightly above the average of all occupations.
- There is a very high proportion of young workers, reflecting the entry-level character and low-skill requirements of many of these jobs.
- The unemployment rate for sales workers is below the national average.
- The full-time earnings of sales workers are around 80% of the national average for all occupations.
- Employment fluctuates with economic conditions and is not seasonal.

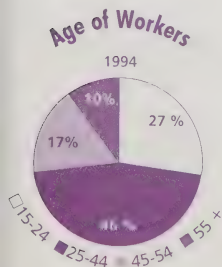
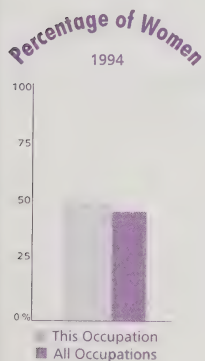
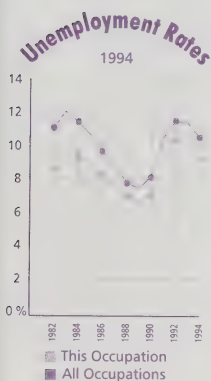
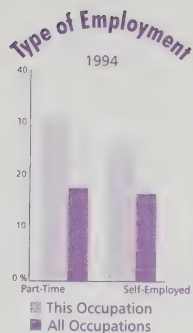
**Current labour market conditions in these occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for retail salespersons and sales clerks are expected to improve through the year 2000, but remain fairly good.

- In the next five years, 85% of the retail sector's employment demand will be to replace salespeople who leave their existing jobs. About 60% of those seeking work will have been previously employed as salespersons or sales clerks.
- Retail trade is expected to provide most of the job growth for this group, although significant contributions to employment are also expected from the wholesale trade and other service industries. Strong growth in a variety of other industries such as business services, clothing and printing and publishing are expected to make smaller contributions to job creation.

See also: This Occupation Code: 642.  
Vol. 2 Field of Study Cross-index: U11, U43, U81, C14, C16.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

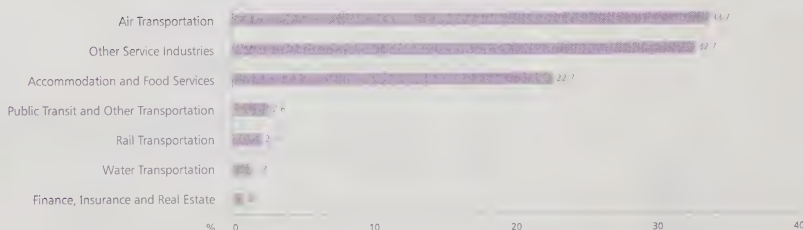
# Occupations in Travel and Accommodation

## At Work

People in these occupations work in travel and tourism agencies, hotels, motels, resorts, airlines, bus, railway and boat companies, steamship lines, travel wholesalers and other organizations.

- Travel counsellors advise clients on travel options, make reservations, prepare tickets and receive payments.
- Airline pursers and flight attendants ensure the safety and comfort of passengers, serve food and beverages and provide information.
- Ship pursers attend to the safety and comfort of passengers, supervise ship attendants and conduct some business activities.
- Airline sales and service agents issue tickets, attend boarding gates, make reservations, trace missing baggage and arrange cargo.
- Airline station agents complete and relay pre-flight data to operational control and down-line stations and perform ticket, baggage and cargo agent duties.
- Airline load planners plan the positioning of cargo on aircraft to distribute and balance the cargo.
- Ticket and cargo agents quote fares and rates, issue tickets, make reservations, process cargo shipments and check baggage for bus, train and marine passengers.
- Hotel front-desk clerks make room reservations, provide information and receive payments.

## Where They Work



## Education, Training and Experience

People in these occupations usually require completion of secondary school, a college diploma or other courses and experience in their field, government approved training, and may require certification.

- Airline load planners require a restricted radio operators licence and usually have airline operations experience.

## Full-Time Earnings

1993

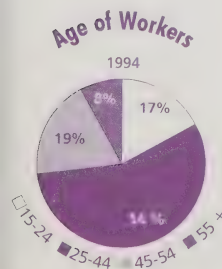
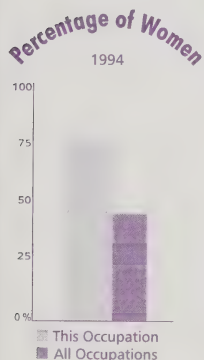
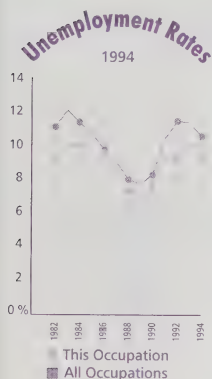
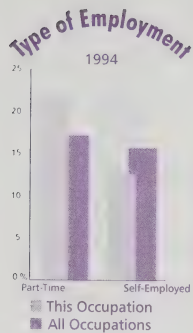
\$42,400

\$27,300

\$12,700

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.



## About these Occupations

61,000 people worked in travel and accommodation occupations in 1994 — 24% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- A third work as travel counsellors, and almost a quarter as hotel clerks.
- A slightly higher-than-average proportion of travel and accommodation workers are employed part-time.
- Self-employment in these occupations is somewhat below average.
- About three quarters of all these workers are women, and the proportion has grown over the last decade. Women have accounted for virtually all the growth in employment in the last 10 years.
- The age composition of this occupation is typical.
- The unemployment rate for travel and accommodation workers is slightly below the national average.
- Full-time earnings of these workers are less than four fifths of the national average for all occupations.
- Employment in travel and accommodation occupations is moderately responsive to business conditions and is not sensitive to seasonal factors.

**Current labour market conditions are fairly good in these occupations despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for travel and accommodation workers are expected to worsen over the next five years, but remain fairly good.

- Increasing use of computers may affect employment and required skills.
- Other service industries are expected to become the largest employer for this group over the next five years, as growth in services increases and the number employed by air transportation declines. The accommodation industry will also be a source of job growth for some occupations in this group.

**See also:** This Occupation Code: 643. Related Code: 6431.  
Vol. 2 Field of Study Cross-index: U11, U85, U86, C85, T16.  
**For further information, see List of Associations.**

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Travel Counsellors

## At Work

Travel counsellors work in travel agencies, hotel chains and transportation and tourism firms. Their duties may require them to:

- Provide travel information to individuals and groups regarding destinations, transportation, accommodation and costs;
- Make transportation and accommodation reservations using a computerized reservation and ticketing system;
- Sell single-fare tickets and packaged tours;
- Promote particular destinations, tour packages and other travel services; and
- Provide travel tips regarding tourist attractions, foreign currency, customs, languages and travel safety.

## Where They Work



## Education, Training and Experience

Travel counsellors must have a high school diploma.

- They usually require a college diploma or vocational training in travel or tourism.
- They may need to obtain certification with the Canadian Institute of Travel Counsellors (CITC). This certification requires three years' experience and the successful completion of courses and examinations.
- With experience, they may progress to managerial positions.

## Full-Time Earnings

1993

\$37,100

\$24,300

\$12,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

21,000 people were working in the travel and accommodation industry as travel counsellors in 1994 — 39% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- The proportion of travel counsellors employed part-time is slightly below the national average.
- Eight out of 10 travel counsellors are women.
- A fifth of workers in this occupation are between 15 and 24 years old, a proportion higher than average.
- The unemployment rate for travel counsellors is slightly below the national average.
- Full-time earnings for workers in this occupation are below average levels.
- Employment in travel and accommodation occupations is moderately responsive to business conditions but is not seasonal.

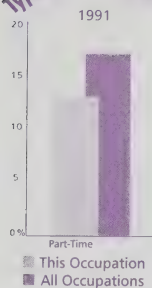
**Current labour market conditions for travel counsellors are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

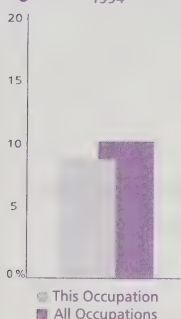
Labour market conditions for travel counsellors will worsen somewhat over the next five years, but remain fairly good.

- The service industry is expected to continue to be the largest employing industry for this occupation and, as such, will provide most job opportunities over the next five years. Although smaller in comparison, growth in jobs related to retail trade operations is also expected.

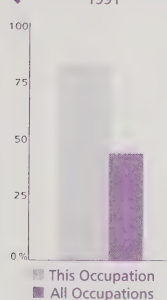
Type of Employment



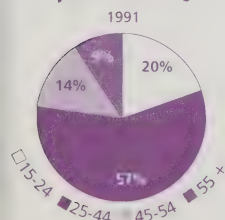
Unemployment Rates



Percentage of Women



Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 6431. Related Code: 643.  
Vol. 2 Field of Study Cross-index: U11, U85, U86, C85.  
For further information, see List of Associations.

# Tour and Recreational Guides and Amusement Occupations

## At Work

People in these occupations are employed by tour operators, resorts and private companies. They may also be self-employed.

- Tour guides escort individuals and groups on tours of cities, waterways and other attractions, and may collect admission fees and sell souvenirs.
- Travel guides escort individuals and groups on vacations and business trips, take care of transportation and accommodation reservations and handle travel problems.
- Outdoor sport and recreational guides organize and conduct trips and expeditions for sports enthusiasts, adventurers, tourists and resort guests.

## Full-Time Earnings

1993

\$43,500

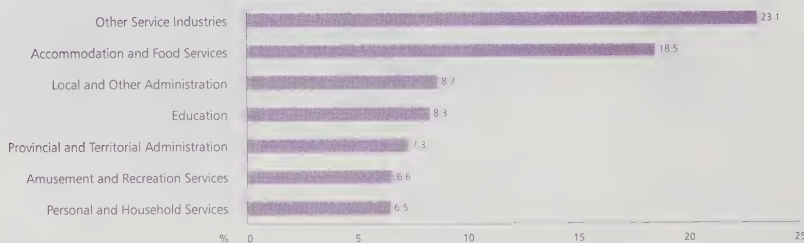
\$25,500

\$6,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in these occupations require different educational and training backgrounds.

- Tour and travel guides usually require on-the-job training and may need to be able to speak English and French.
- Outdoor sports and recreational guides must have knowledge of a particular geographical area and proven ability in their area of recreation, such as in white water rafting.
- Hot-air balloon pilots require 10 hours of ground school and 16 hours of pilot-in-command experience. They must be licensed by the federal government.

## About these Occupations

14,000 people worked as travel and recreational guides in 1994 — a 33% increase since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are highly favourable.

- 70% of these people work as tour and travel guides.
- 35% of these workers are employed part-time — more than twice the proportion for all occupations.
- The proportion of these workers who are self-employed is more than double the national average for all occupations.
- Two thirds of workers in this group are women.
- A high proportion of young people work in these occupations, with almost 30% aged from 15 to 24 years. This reflects the low-skill and entry-level nature of many of the jobs in this occupational group.
- The unemployment rate is about the same as the national average.
- Full-time earnings for travel and recreational guides are about 70% of the national average for all occupations.
- Employment is moderately sensitive to business conditions but is very sensitive to seasonal influences.

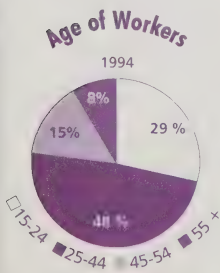
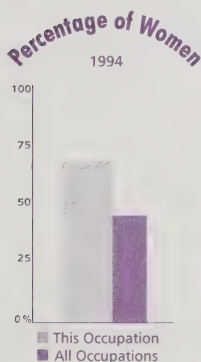
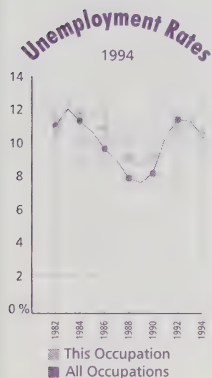
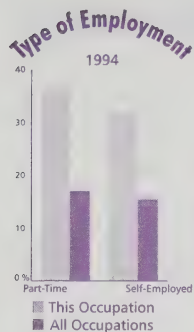
**Current labour market conditions for this group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations will worsen somewhat over the next five years, but remain fairly good.

- Most job growth is expected to occur in the service and accommodation industries. A decline is expected for this group in jobs related to education, and to local and provincial administration.

See also: This Occupation Code: 644.  
Vol. 2 Field of Study Cross-index: U11, U23, U86, C21, T05.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Occupations in Food and Beverage Service

## At Work

People in these occupations work in restaurants, hotel dining rooms, private clubs, cocktail lounges, bars, taverns, banquet halls and licensed and other establishments.

- **Maîtres d'hôtel, hosts and hostesses** take reservations, greet and escort patrons to tables, attend to complaints and requests and accept payments. They also train, supervise and co-ordinate food and beverage servers and other serving staff.
- **Bartenders** prepare cocktails and other drinks for waiters and waitresses or serve drinks directly to patrons and collect payments. They also maintain an inventory of bar supplies and may supervise other bartenders and bar staff.
- **Waiters and waitresses** present menus, take patrons' orders and serve food and beverages. They accept payments and may recommend wines and prepare and serve specialty foods at patrons' tables. Wine stewards suggest, present and serve wines in formal settings.

## Full-Time Earnings

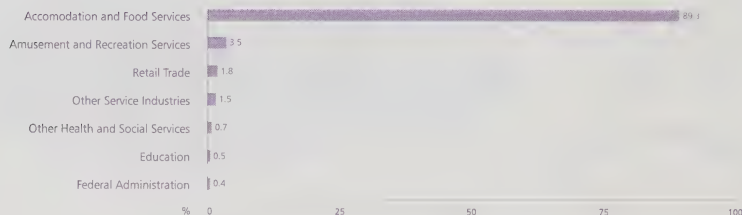
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in these occupations may require a high school diploma.

- **Maîtres d'hôtel, hosts and hostesses** usually require several weeks' on-the-job training.
- **Maîtres d'hôtel** require experience as formal or captain waiters and waitresses, or other food experience.
- **Bartenders** usually require a college or other bartending program, or courses in mixing drinks.
- **Waiters and waitresses** may require on-the-job training. Formal waiters and waitresses may require college or vocational school courses.
- **Wine stewards** may require courses in wine selection and service or experience as formal or captain waiters and waitresses.

## About these Occupations

262,000 people worked in food and beverage service occupations in 1994 — 25% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are highly favourable.

- 79% work as food and beverage servers.
- An extremely large proportion of these workers is employed part-time — more than twice the average.
- Self-employment is below average in these occupations.
- Over 60% of food and beverage service workers are women. The proportion of women employed in this occupation has declined slightly over the last decade.
- An extremely high proportion (40%) of food and beverage service workers is made up of young people, between 15 and 24 years old, reflecting the low-skill and entry-level nature of many of the jobs in this occupational group.
- The unemployment rate for food and beverage service workers is far above the national average and is higher than in other comparable sales and service occupations.
- Full-time earnings for food and beverage service workers are about three fifths the national average for all occupations — lower than in other comparable sales and service occupations.
- Employment in these occupations is sensitive to business conditions but is not seasonal.

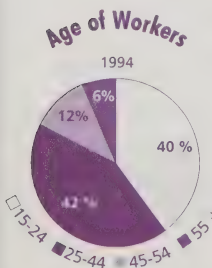
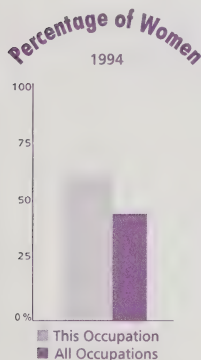
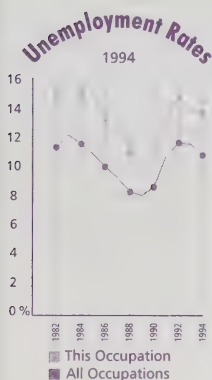
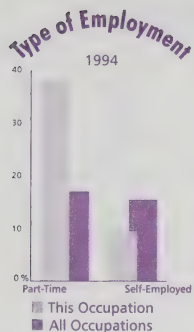
**Current labour market conditions for food and beverage service workers are poor.**

## Looking to the Year 2000

Labour market conditions for food and beverage service workers are expected to improve from poor to fairly good over the next five years.

- These will remain low-skill, low-wage, entry-level occupations.
- Job growth is expected to be moderate in the accommodation and food services industries, the largest employer for this group. Additional job opportunities may occur in the amusement and recreation service industry but on a much smaller scale.

**See also:** This Occupation Code: 645.  
Vol. 2 Field of Study Cross-index: U11, U86, C13, T81, T83.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Child Care and Home Support Workers

## At Work

People in this group work in government and non-profit agencies, home-care, foster-parent and baby-sitting agencies, health care institutions, embassies, private households, public and private nursery, elementary and high schools and day-care centres. They may also be self-employed.

- Visiting homemakers provide support services during periods of illness or other problems.
- Housekeepers perform housekeeping, prepare meals and may provide child care.
- Companions provide companionship and personal care to the elderly and those recovering from illness.
- Early childhood educators plan and organize activities for preschool children and encourage their intellectual, physical and emotional growth.
- Early childhood educator assistants and elementary and high school teacher assistants, under supervision, help with lessons, outings and other activities, and assist special-needs students with mobility, communication and personal hygiene.

This occupational group also includes baby-sitters, parents' helpers, nannies and other live-in caregivers.

## Full-Time Earnings

1993

\$46,700

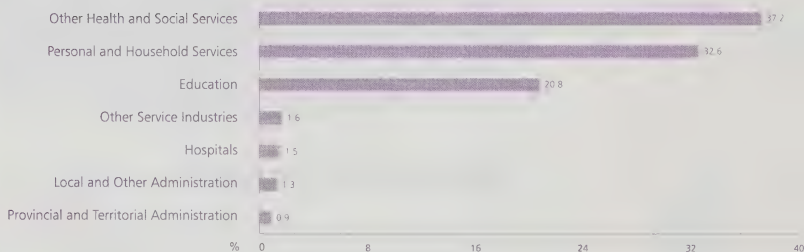
\$26,000

\$7,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group usually have some high school education.

- They may need college or other courses in child care, home management and support, and first aid.
- They may require experience and have to demonstrate ability in their area of work.
- Early childhood educators require a university degree or college diploma in early childhood education or a university degree in education.
- Elementary and high school teacher assistants usually need a high school diploma. They may require specialized training and experience with special-needs students.

## About these Occupations

307,000 people were employed in the various child care and home support occupations in 1994 — an increase of 27% since 1984. During the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- 57% work as baby-sitters and nannies and as early childhood educators and assistants.
- 32% work part-time — about twice the national average.
- The proportion of these workers who are self-employed is twice the national average.
- 80% of child care and home support workers are women.
- Child care and home support workers are somewhat younger than the total work force.
- The unemployment rate for this group is somewhat below the national rate.
- Full-time earnings for child care and home support workers are about three quarters of the national average.
- Employment is somewhat sensitive to overall business conditions and is also somewhat seasonal.

**Current labour market conditions for child care workers are fairly good despite weakness remaining from the 1991-92 recession.**

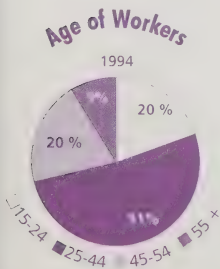
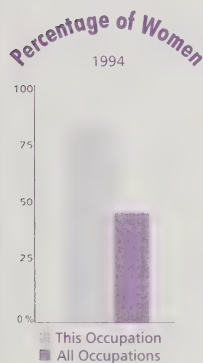
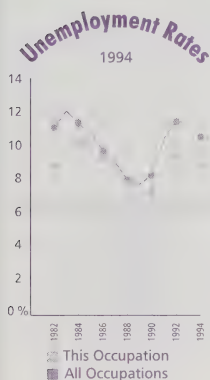
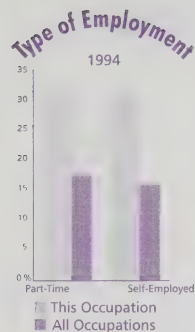
## Looking to the Year 2000

Labour market conditions in this group will remain fairly good through the year 2000.

- An ageing population is likely to decrease demand for child care workers but increase demand for home care workers.
- Health, household services and education are expected to continue to be the major employers for this occupational group, with strong job growth across all three industries over the next five years.

See also:

This Occupation Code: 647. Related Code: 6470.  
Vol. 2 Field of Study Cross-index: U22, U86, C21, C56, C84.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





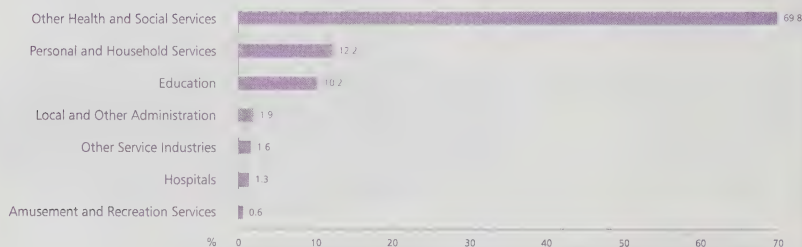
# Early Childhood Educators and Assistants

## At Work

People in this occupation work in day-care centres and nursery schools.

- Early childhood educators plan, organize and lead activities for preschool children that are designed to encourage intellectual, physical and emotional growth. They observe children for signs of learning disabilities or emotional problems, and discuss progress or problems with parents and staff members.
- Early childhood educator assistants take care of preschool children under the supervision of early childhood educators. They also maintain day-care equipment and assist in housekeeping duties.

## Where They Work



## Education, Training and Experience

People in this occupation need different educational levels, depending on their position.

- Early childhood educators usually require a bachelor's degree or college diploma in early childhood education or a bachelor's degree in education.
- With experience, early childhood educators may progress to senior positions such as day-care supervisor.
- Early childhood educator assistants usually have a high school diploma and require experience in child care.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

83,000 people were employed as early childhood educators and assistants in 1994 — 67% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

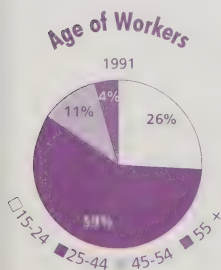
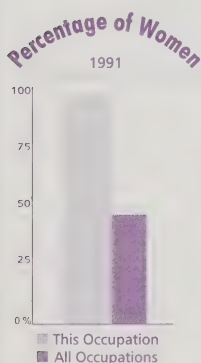
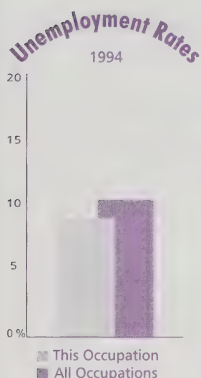
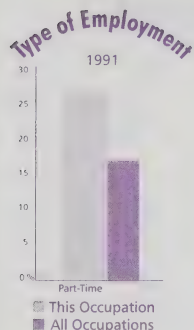
- One quarter of these early childhood workers are employed part-time — considerably above the national average.
- 96% of early childhood educators and assistants are women.
- 26% of workers in this group are less than 25 years old — about double the national average — reflecting the entry-level character and low-skill requirements of many jobs in the occupation.
- The unemployment rate for early childhood educators and assistants is somewhat below the national average.
- Full-time earnings are well below the national average.
- Employment for early childhood educators and assistants fluctuates somewhat with overall business conditions and is seasonal.

**Current labour market conditions for early childhood educators and assistants are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to remain fairly good through the year 2000.

- An ageing population may decrease the growth in demand for child care workers.
- New jobs are expected to be concentrated in the private service sector over the next five years.



**See also:** This Occupation Code: 6470. Related Code: 647.  
Vol. 2 Field of Study Cross-Index: U22, U24, U86, C21.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?



# Other Occupations in Personal Services

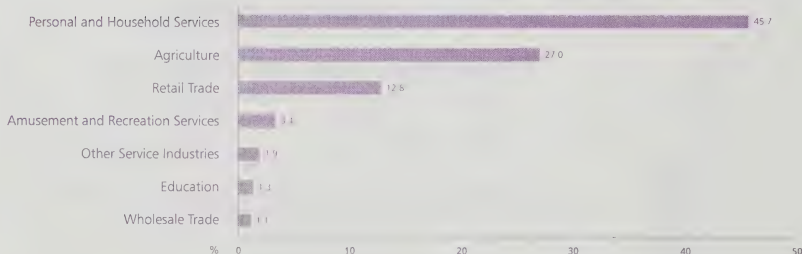
## At Work

People in this group work in beauty salons, fashion boutiques, modelling schools, image consulting companies, electrolysis studios, scalp treatment clinics, animal hospitals and clinics, animal shelters, kennels, zoos, pet grooming service companies, laboratories, and psychic consultants, fortune telling, astrological and similar services. They may also be self-employed.

- Image consultants provide advice to improve their clients' general appearance, posture and manner.
- Estheticians administer facial and other skin treatments.
- Electrologists remove unwanted hair permanently using specialized electrical equipment.
- Manicurists and pedicurists clean, shape and polish fingernails and toenails.
- Tattoo artists apply permanent designs to clients' skin.
- Pet groomers and animal care workers feed, handle, train and groom animals and assist veterinarians and other animal care workers.

This occupational group also includes etiquette and wedding consultants, wardrobe and make-up consultants, public speaking consultants, weight loss consultants, beauty treatment operators, cosmeticians, dog trainers, kennel, veterinary and zoo attendants and fortune tellers.

## Where They Work



## Education, Training and Experience

People in this group usually must have a high school diploma.

- They usually need specialized or on-the-job training.
- Beauty treatment operators and manicurists in Manitoba require provincial licences.
- Skin care specialists and manicurists in Nova Scotia require provincial licences.

## Full-Time Earnings

1993

\$42,700

\$23,700

\$7,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

27,000 people were employed in this occupational group in 1994. Employment in the group grew by about 17% between 1984 and 1994, the same as economy-wide employment growth over the same period. Recent employment trends in this occupational group are favourable.

- Half of those working in these occupations are estheticians and electrologists.
- The proportion of self-employed workers is about double the average for all occupations.
- Women make up about 72% of the workers in these personal service occupations, considerably more than the average.
- There is a very high proportion of young workers, reflecting the low-skill, entry-level nature of many of these jobs.
- The unemployment rate in these occupations is close to the national average.
- Full-time earnings of these personal service workers are about two thirds of the average for all occupations, among the lowest for comparable occupations.
- Employment in this group is moderately sensitive to business conditions and is not seasonal.

**Current labour market conditions in these occupations are fairly good despite weakness remaining from the 1991-92 recession.**

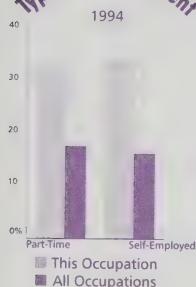
## Looking to the Year 2000

Labour market conditions in this group of occupations will remain fairly good through the year 2000.

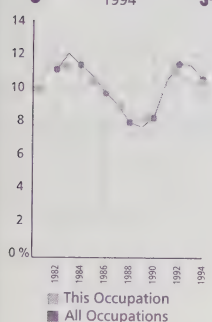
- Employment demand will primarily be to replace those workers who leave their existing jobs. Previous experience will be an asset in seeking work, but employment prospects for school-leavers will remain relatively steady, given the low-skill, entry-level nature of many jobs.
- Strong growth in the personal service industry is expected to be the source of most jobs for this group over the next five years. Agriculture and retail trade are also expected to make a strong contribution to employment growth.

See also: This Occupation Code: 648.  
Vol. 2 Field of Study Cross-index: C21, C84, T05.  
For further information, see List of Associations.

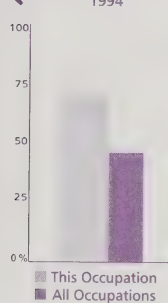
### Type of Employment



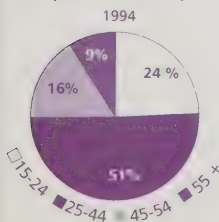
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





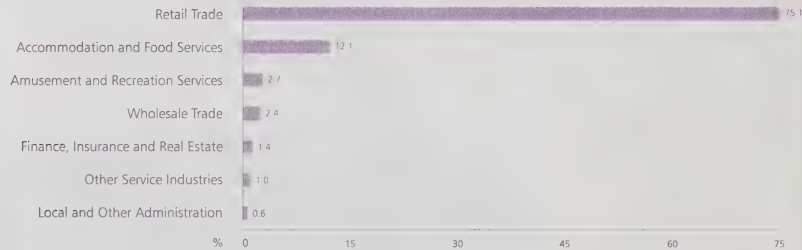
# Cashiers

## At Work

Cashiers work in stores, restaurants, theatres, government and other business offices, self-serve gas bars and other organizations throughout the private sector. Their duties may require them to:

- Establish or identify the price of goods, services and admission fees;
- Total bills using a calculators, cash registers and optical price scanners;
- Receive payment in cash or by cheque, credit card and automatic debit;
- Wrap or place merchandise in bags;
- Provide information to customers; and
- Calculate and record total sales received on completion of their work shift.

## Where They Work



## Education, Training and Experience

Cashiers usually require some high school education.

- They may have to be eligible for bonding, that is, be able to prove to an employer that they can hold a position of trust so that the employer can insure a cashier's services against any losses he or she might incur.
- With additional training or experience, they may progress to supervisory positions such as head cashier.

## Full-Time Earnings

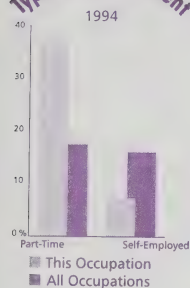
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Type of Employment



## About this Occupation

177,000 people were employed as cashiers in 1994 — 4% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- 37% of cashiers work part-time — about twice the national average.
- There are few self-employed cashiers.
- 80% of cashiers are women.
- Cashiers are young — almost 30% are less than 25 years old, reflecting the entry-level nature and low-skill requirements of this occupation.
- The unemployment rate for cashiers is somewhat below the national average.
- Full-time earnings of cashiers are about 70% of the national average for all occupations.
- Employment of cashiers fluctuates with economic conditions but is not seasonal.

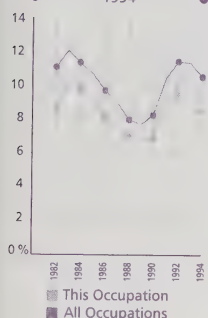
**Current labour market conditions for cashiers are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

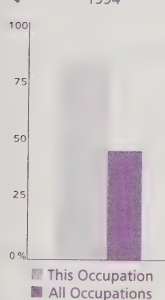
Labour market conditions for cashiers are expected to improve over the next five years, but remain fairly good.

- As this is an entry-level job, many of the people seeking work in this occupation have recently left school or are new immigrants.
- This occupation is expected to experience moderate job growth in retail trade over the next five years. Stronger job growth is expected in accommodation and food services.

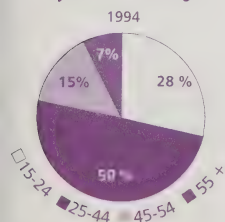
## Unemployment Rates



## Percentage of Women



## Age of Workers



See also: This Occupation Code: 661.  
Vol. 2 Field of Study Cross-index: U11, C11, C12, C14, T16.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

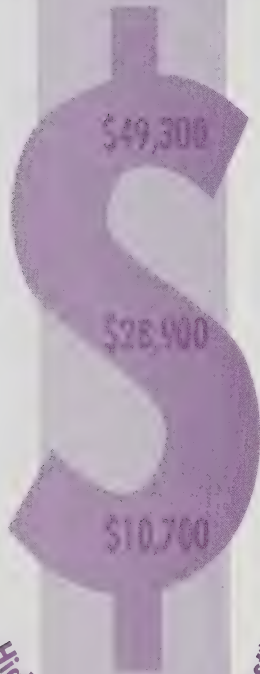
How will labour market conditions change in this group?



# Other Sales and Related Occupations

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

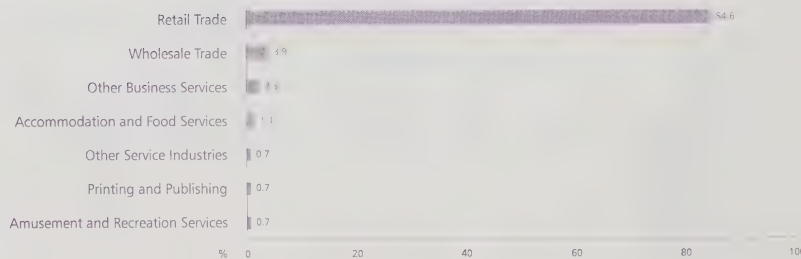
## At Work

People in this group work in service stations, marinas, grocery, hardware and department stores, mail order warehouses and a wide range of retail and wholesale organizations. They may also be self-employed.

- Automotive service station attendants refuel vehicles, perform minor service and maintenance such as checking and replacing motor oil, window washing fluid and air in tires, and receive payments.
- Marina service station attendants refuel boats, pump boats' septic systems, rent boats and equipment, receive payments and maintain dock area and marina facilities.
- Grocery clerks and shelf stockers bag and box customers' purchases, carry purchases to customers' vehicles, price items and stock shelves and display areas.
- Direct distributors and door-to-door salespersons sell merchandise in private homes.
- Street vendors set up, display and sell merchandise on sidewalks and at public events.
- Demonstrators show, describe and sell goods and services in retail and other organizations, at exhibitions and trade shows, and in private homes.

This occupational group also includes order fillers, warehouse stock pickers, canvassers and telephone solicitors and telemarketers.

## Where They Work

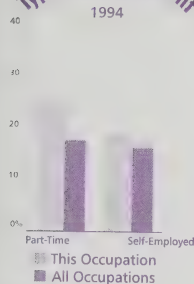


## Education, Training and Experience

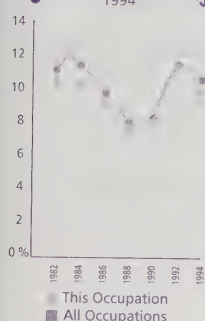
People in this group usually must have some high school education.

- Propane and natural gas pump attendants may require an operators licence.
- Self-employed street vendors and door-to-door salespersons may require municipal merchants permits.

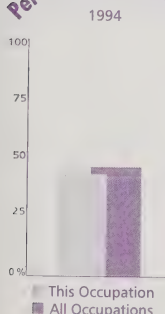
## Type of Employment



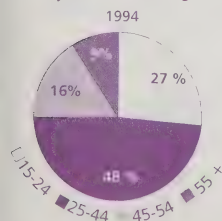
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

190,000 people were employed in these occupations in 1994. Employment in this occupational group grew by about 15% between 1984 and 1994, slightly less than the economy-wide employment growth of 17% for the same period. Recent employment trends in this occupational group are favourable.

- 54% work as grocery clerks.
- One quarter of workers in these sales and related occupations are employed part-time, considerably above average.
- The proportion of self-employed workers is slightly above average.
- 43% of the workers in these occupations are women, slightly less than the average in all occupations.
- There is a very high proportion of young workers reflecting the low-skill, entry-level nature of many of the jobs.
- The unemployment rate for this group is close to the national average.
- Full-time earnings in these occupations are well below average levels.
- Employment in these occupations is sensitive to overall business conditions and is not seasonal.

**Current labour market conditions in these occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations will improve somewhat over the next five years but remain fairly good.

- A large part of the demand (87%) will be to replace those workers who leave their existing jobs. 63% of the workers seeking employment in these occupations will have been previously employed in these occupations while 33% will be school-leavers.
- Retail trade is expected to continue to be the dominant source of jobs for this occupational group over the next five years.

See also: This Occupation Code: 662.  
Vol. 2 Field of Study Cross-index: U11, U43, U81, C14, C16.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Elemental Medical and Hospital Assistants

## At Work

These assistants work in hospitals and other health care institutions, medical clinics and offices of health care professionals such as chiropractors, occupational therapists and physiotherapists.

- Blood donor clinic assistants set up equipment, maintain supplies, monitor donors under the supervision of a registered nurse and label donated blood.
- Central supply aides collect and sort soiled supplies and instruments from hospital departments, operate machines to clean, reprocess and sterilize these supplies, and assemble packs of sterile supplies and instruments.
- Chiropractic aides assist elderly and incapacitated patients, position them for treatments and connect treatment machines as directed by chiropractors. They may perform clerical duties.
- Occupational therapy assistants prepare and maintain work materials and supplies. They may assist patients in crafts and other activities as directed by occupational therapists.
- Physiotherapy assistants take patients to treatment rooms, clean equipment, change linen and assist patients in the use of equipment and maintenance programs as directed by physiotherapists.

## Full-Time Earnings

1993

\$41,900

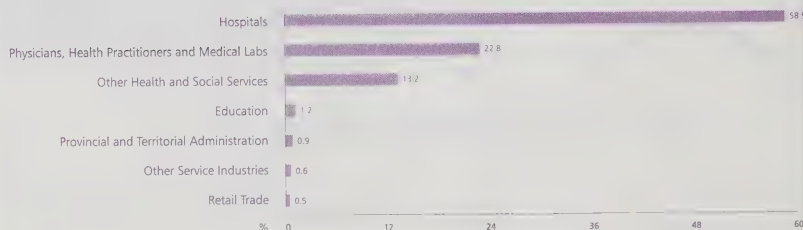
\$34,900

\$14,900

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These assistants need some high school education.

- They require on-the-job training.
- Some employers may require health care courses or short-term college programs related to their area of work.

## About this Occupation

9,000 people were employed as elemental medical and hospital assistants in 1994—an increase of 23% since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 22% of elemental medical and hospital assistants are employed part-time, more than the national average.
- The proportion of self-employment in this occupation is about half the average.
- 69% of medical and hospital assistants are women.
- There are somewhat fewer young workers than the work force average.
- The unemployment rate is considerably below the national average.
- Full-time earnings of elemental medical and hospital assistants are about 94% of the national average for all occupations, among the highest for low-skill sales and service occupations.
- Employment of medical and hospital assistants is moderately sensitive to fluctuations in business conditions but is not seasonal.

**Current labour market conditions for elemental medical and hospital assistants are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for elemental medical and hospital assistants will remain good through the year 2000.

- Restructuring of the medical system is likely to decrease demand for these workers in acute care hospitals and increase demand in extended care facilities.
- Physicians, health care practitioners and medical labs are expected to generate over half the new jobs for this occupation over the next five years. Demand by hospitals is also expected to be strong.

## Work Prospects

1995 to 2000

Getting Better

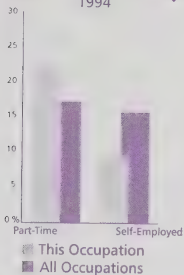
Stable

Getting Worse

How will labour market conditions change in this group?

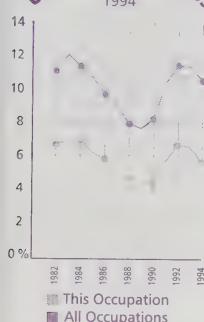
### Type of Employment

1994



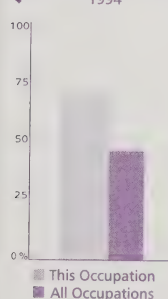
### Unemployment Rates

1994



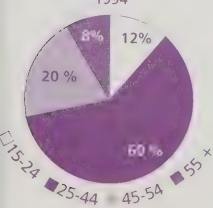
### Percentage of Women

1994



### Age of Workers

1994



See also:

This Occupation Code: 663.  
Vol. 2 Field of Study Cross-index: U56, U58, C56, T53.  
For further information, see List of Associations.



# Food Counter Attendants and Kitchen Helpers

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

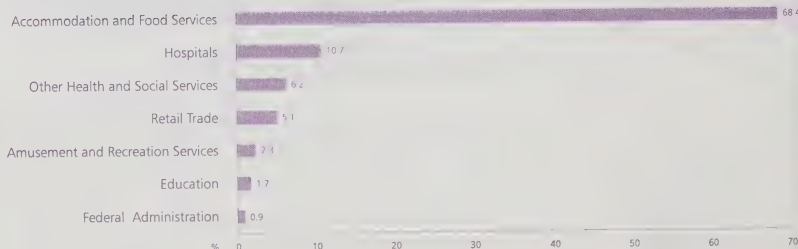
## At Work

People in this group work in cafeterias, fast food outlets, restaurants, hotels, hospitals and other organizations.

- Food service counter attendants and food preparers take customers' orders, prepare sandwiches, hamburgers, salads, milkshakes and similar items, serve customers at counters and buffet tables, and may receive payment for items purchased. They also heat or finish cooking partially cooked foods received from central food commissaries.
- Kitchen helpers wash and peel vegetables and fruit, wash work tables and appliances, clean kitchen refuse containers, unpack and store supplies, sweep and mop floors, and assist cooks and kitchen staff.
- Food service helpers clean tables and trays, take dishes, flatware and other items to serving areas to set tables, replenish condiments and other supplies, and perform other duties such as scraping and stacking dishes and running errands.
- Dishwashers operate dishwashers or wash dishes, glassware, flatware, pots and pans by hand, store dishes and may clean and polish silverware.

This occupational group also includes fast food preparers, salad bar attendants, sandwich makers, bartender helpers, bus boys/girls and cook's helpers.

## Where They Work



## Education, Training and Experience

People in this group may require some high school education.

- They may get on-the-job training.
- With further training and experience, they may move into other occupations in food preparation and service such as cook and waiter.

## About these Occupations

220,000 people were employed as food counter attendants and helpers in 1994. Employment in this occupational group grew by about 18% between 1984 and 1994, slightly more than the 17% growth of employment economy-wide for the same period. Recent employment trends in this occupational group are favourable.

- 54% are kitchen and food service helpers and 46% are food service counter attendants
- A third of all workers in this group are employed part-time, about double the average for all occupations.
- The proportion of self-employed workers in this group is well below the average for all occupations.
- 54% of the food counter attendants and helpers are women, somewhat more than the average.
- An extremely high proportion in this group are young workers, reflecting the low-skill, entry-level nature of many of the jobs.
- The unemployment rate is above the national average and is the highest among low-skill sales and service workers.
- Full-time earnings in this group are less than two thirds of average levels and are among the lowest for low-skill occupations in sales and service occupations.
- Employment in these occupations is sensitive to overall business conditions but is not seasonal.

**Current labour market conditions for food counter attendants and kitchen helpers are poor.**

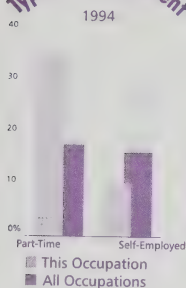
## Looking to the Year 2000

Labour market conditions in these occupations will improve from poor to fairly good over the next five years.

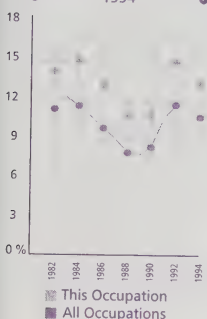
- Almost 90% of demand will be to replace those workers who leave their existing jobs. 65% of the workers seeking employment in these occupations will have been previously employed in these occupations, while some 30% will be school-leavers.
- Almost all employment is in the accommodation and food service industry, which is expected to generate almost all job growth for this group over the next five years. Hospitals and other service industries which have a much smaller share of employment are expected to require less labour from this group.

See also: This Occupation Code: 664.  
Vol. 2 Field of Study Cross-index: U86, C13, T81, T83.  
For further information, see List of Associations.

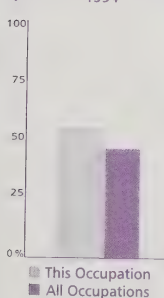
Type of Employment



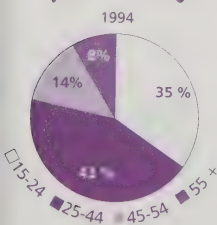
Unemployment Rates



Percentage of Women



Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Security Guards and Related Occupations

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$39,900 is the average for all occupations.

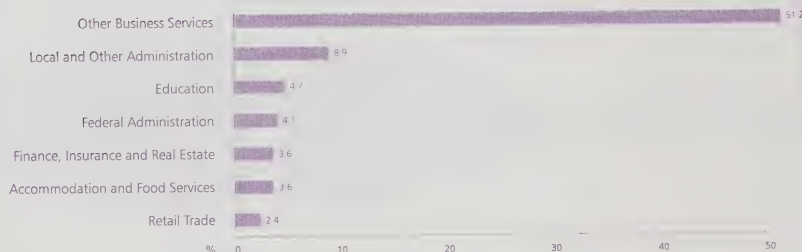
## At Work

People in this occupation work in private security agencies, retail stores, industrial establishments, museums and other organizations. Their duties may require them to:

- Issue passes to control access to facilities and direct visitors to appropriate areas;
- Patrol assigned areas to guard against theft, shoplifting, vandalism and fire;
- Enforce regulations to maintain order at public events;
- Perform airport security checks of passengers and luggage;
- Drive and guard armoured trucks and deliver cash and valuables to banks, automated teller machines and retail organizations; and
- Supervise and co-ordinate the activities of other security guards.

This occupation also includes gate attendants, bodyguards, bouncers, commissionaires and crossing guards.

## Where They Work



## Education, Training and Experience

People in this occupation usually need some high school education.

- Airport security guards are given training by their employers. People in other security and guarding occupations may also get training.
- Security guards carrying firearms require a firearms licence.
- Armoured car drivers need drivers licences.
- With experience, they may progress to senior security guards and supervisors.

## About this Occupation

61,000 people were employed as security guards and in related occupations in 1994 — a 15% increase over 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- 15% of security guards are employed part-time, about the national average.
- Very few security guards are self-employed.
- Only 22% in these security occupations are women, about half the national average for all occupations, although the proportion of women has increased over the last decade.
- Security guards are slightly younger than the total work force.
- Unemployment rates are somewhat below the national average.
- Full-time earnings of security guards are above the national average for all occupations and are the highest of any low-skill sales and service occupation.
- Employment of security guards is moderately sensitive to overall business conditions but is not seasonal.

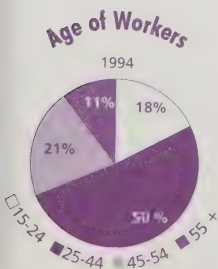
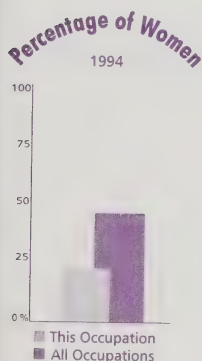
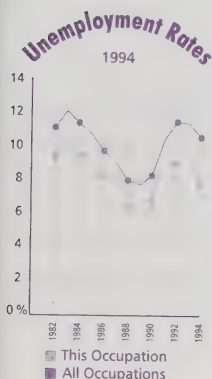
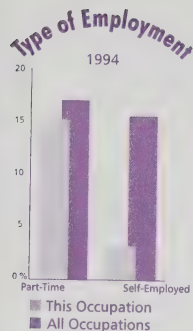
**Current labour market conditions for security guards are fairly good.**

## Looking to the Year 2000

Labour market conditions for security guards and related workers are expected to worsen from fairly good to poor over the next five years.

- Government cutbacks to police forces and rising fear of crime may increase demand for private security guards.
- While most of the major employing industries for this occupation are expected to employ fewer workers over the next five years, additional jobs should be created in the education and accommodation sectors.

See also: This Occupation Code: 665.  
Vol. 2 Field of Study Cross-index: C62, C81.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Cleaners

## At Work

These cleaners work for hotels, motels, hospitals and other health care institutions, school boards, office and apartment building management and cleaning service companies, and in recreational facilities, shopping malls and private residences.

- Light duty cleaners clean hotels, motels, schools and private residences. They make beds, change linen, clean and disinfect kitchens, bathrooms, operating rooms and other hospital areas.
- Chimney cleaners operate industrial vacuum cleaners and use hand tools to clean chimneys and fireplaces.
- Furnace and ventilation system cleaners clean furnace filters, ducts and vents.
- Sandblasters operate sandblasting, pressurized steam and hydroblasting equipment to clean building exteriors, tanks and industrial equipment.
- Vehicle cleaners operate equipment, or work by hand, to clean the interiors and exteriors of automobiles and trucks.
- Janitors, caretakers and building superintendents clean and maintain the interiors and exteriors of buildings and surrounding grounds. They may advertise vacancies, show apartments and offices to prospective tenants, and collect rents.

This occupational group also includes window washers, carpet and upholstery cleaners, cleaners of septic tanks and freight cars, custodians, industrial cleaners and plant cleaners.

## Full-Time Earnings

1993

\$36,800

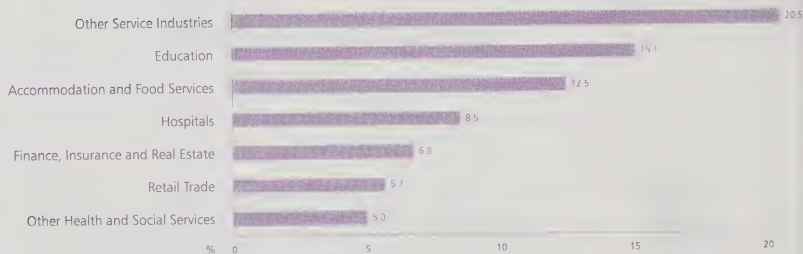
\$23,400

\$9,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$24,900 is the average for all occupations.

## Where They Work

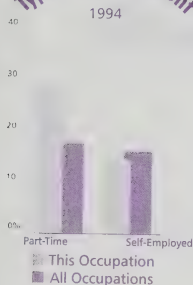


## Education, Training and Experience

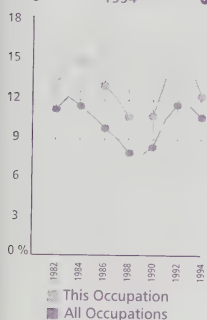
These cleaners may require a high school diploma.

- Light and specialized cleaners do not need any formal education. They usually get on-the-job training and may need experience in specialized cleaning activities.
- Janitors, caretakers and building superintendents may need previous cleaning and maintenance experience.
- With additional training and experience, they may progress to supervisory positions.

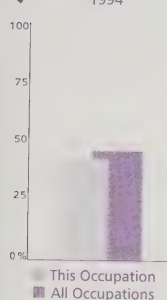
## Type of Employment



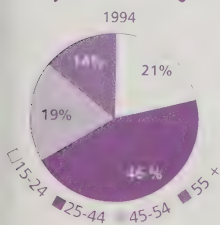
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

402,000 people were employed as cleaners, janitors and building supervisors in 1994. Employment in this occupational group grew by about 8% between 1984 and 1994, while employment grew by 17% economy-wide over the same period. Recent employment trends in this occupational group are unfavourable.

- 52% are janitors and building supervisors, and 41% are light duty cleaners.
- 27% of these cleaners are employed part-time, considerably above the national average.
- 14% of these cleaners and building supervisors are self-employed, slightly less than the national average.
- 42% of the cleaners and building supervisors are women, slightly less than the average in all occupations.
- There is a very high proportion of young workers, reflecting the low-skill, entry-level nature of many of the jobs.
- The unemployment rate for these occupations is above the national rate and is among the highest for unskilled sales and service occupations.
- Full-time earnings of cleaners are about two thirds of average levels and are among the lowest for unskilled sales and service occupations.
- Employment of cleaners is moderately sensitive to overall business activity and is not seasonal.

**Current labour market conditions for cleaners are poor.**

## Looking to the Year 2000

Labour market conditions in these occupations will remain poor through the year 2000.

- Most demand (95%) will be to replace those workers who leave their existing jobs. 71% of the workers seeking employment in these occupations will have been previously employed in these occupations, while some 23% will be school-leavers and 6% will be immigrants.
- Employment of cleaners is distributed over a wide variety of industries, with the largest employers being the service industry and education. Education is expected to employ fewer from this group, which will dampen overall growth prospects.

See also: This Occupation Code: 666.  
Vol. 2 Field of Study Cross-index: U11, T316.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





# Other Attendants in Travel, Accommodation and Recreation

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

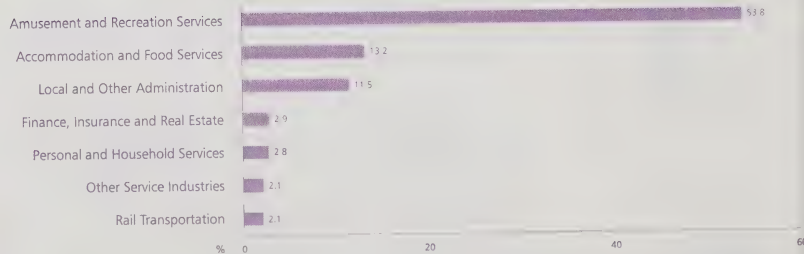
## At Work

These attendants work for amusement parks, fairs, arenas, billiard parlours, gambling casinos, bowling alleys, golf courses, ski centres, tennis clubs and other recreational and sports facilities, hotels, and railway and water transport companies.

- Amusement park attendants collect tickets, assist patrons on and off rides, and secure and release safety belts and bars.
- Amusement attraction operators transport rides, games and attractions to amusement sites, set up attractions and operate rides.
- Ice makers operate machines, prepare ice surfaces of rinks for hockey games and other activities.
- Recreational facility attendants schedule the use of golf courses, tennis courts, fitness clubs and other recreational facilities. They may collect fees and sell and rent sports equipment.
- Bellhops carry luggage for hotel and resort guests, escort them to their rooms, ensure that the rooms are in order and provide information on hotel services and local points of interest.
- Baggage porters carry travellers' luggage by hand or use hand carts, and arrange for ground transportation.
- Ship attendants serve food and beverages, clean cabins, make beds and carry passengers' luggage.
- Train service attendants set and clear dining car tables, clean sleeping cars and assist passengers.

This occupational group also includes ski lift and bowling alley attendants, hotel doorkeepers, redcaps, athletic equipment custodians and attendants of campgrounds, bingo halls, tennis courts and other recreational facilities.

## Where They Work



## Education, Training and Experience

People in this group may require some high school education.

## About these Occupations

26,000 people were employed in 1994 as attendants in amusement and recreation and in travel and accommodation. Employment in this occupational group grew by about 34% between 1984 and 1994, much higher than the economy-wide employment growth of 17% for the same period. Recent employment trends in this occupational group are highly favourable.

- 83% of these attendants work in amusement and recreation occupations.
- One third of these attendants in travel and amusement jobs are employed part-time, almost double the national average.
- The proportion of self-employed people in these occupations is about the same as the national average.
- 48% of these travel and amusement attendants are women, slightly more than in all occupations.
- There is a very high proportion of young workers, reflecting the low-skill, entry-level nature of many of the jobs.
- The unemployment rate for these occupations is above the national rate and is among the highest for unskilled sales and service occupations.
- Full-time earnings of these attendants are well below average levels but have moved upward over the last 10 years.
- Employment of travel and amusement attendants is sensitive to overall business activity and is seasonal.

**Current labour market conditions for travel, accommodation and recreation attendants are fairly good despite weakness remaining from the 1991-92 recession.**

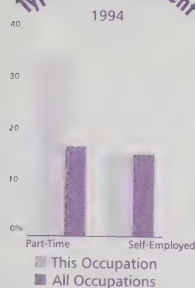
## Looking to the Year 2000

Labour market conditions in these occupations will worsen from fairly good to poor over the next five years.

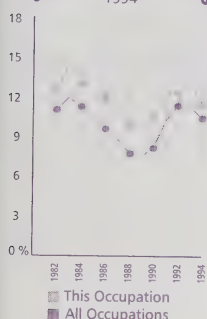
- 92% of demand will be to replace those workers who leave their existing jobs. Some 71% of the workers seeking employment in these occupations will have been previously employed in these trades, and 23% will be school-leavers.
- Amusement and recreation services are expected to continue to generate strong employment for this group over the next five years. The area of accommodation and food service is also expected to make a significant but smaller contribution to employment growth.

See also: This Occupation Code: 667.  
Vol. 2 Field of Study Cross-index: U11, U23, U49, U86, C85.  
For further information, see List of Associations.

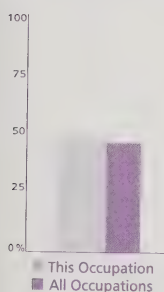
Type of Employment



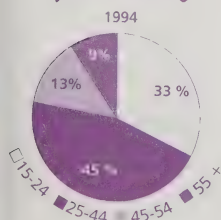
Unemployment Rates



Percentage of Women



Age of Workers



Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Other Elemental Service Occupations

## At Work

People in this group work in dry cleaning and laundry businesses, hotel and health care institutions and a wide range of retail organizations.

- Dry cleaning operators use machines to clean suits, sweaters, draperies, cushion covers and other garments and household articles. They may specialize in cleaning leather and suede garments.
- Dry cleaning and laundry inspectors check garments to make sure that they meet appropriate standards.
- Ironing, pressing and finishing workers operate pressing and ironing machines and hand-iron fine lace or silk items.
- Beauty salon attendants shampoo customers' hair and assist hairstylists.
- Door attendants assist persons entering and leaving facilities.
- Ticket takers and ushers receive admission tickets at events.
- Funeral attendants drive hearses, arrange floral displays and perform other related duties.

This occupational group also includes fur cleaning operators, laundry machine operators and attendants, and parking lot attendants.

## Full-Time Earnings

1993

\$35,500

\$17,600

\$10,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work

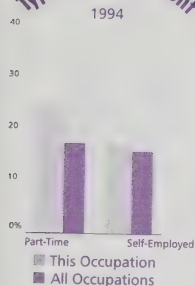


## Education, Training and Experience

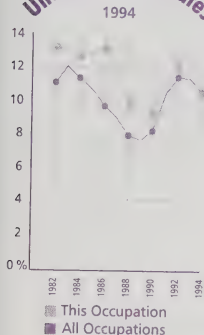
People in this group usually require some high school education.

- People in dry cleaning, laundry, ironing and pressing occupations usually require on-the-job training and may need experience as inspectors or assemblers.
- Dry cleaners in British Columbia may have to complete a one-year apprenticeship.
- Suede, leather and fur cleaners may need experience as dry cleaning or laundry machine operators.
- Funeral attendants and car jockeys require drivers licences.

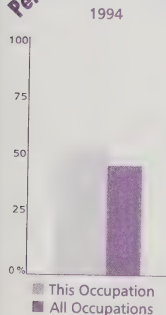
## Type of Employment



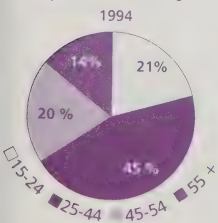
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

54,000 people were employed in 1994 in these elemental service occupations. Employment in this group declined by about 8% between 1984 and 1994, in contrast to economy-wide employment growth of 17% over the same period. Recent employment trends in this occupational group are unfavourable.

- 64% of these elemental service workers are employed in dry cleaning, laundry, ironing and finishing occupations.
- Almost one quarter of these workers are employed part-time, considerably above average.
- 17% of these elemental service workers are self-employed, about the same as the average of all occupations.
- 54% of workers in these occupations are women, somewhat more than the average for all occupations.
- There is a high proportion of young workers, reflecting the low-skill, entry-level nature of many of the jobs.
- The unemployment rate in these occupations is slightly above the national average.
- Full-time earnings of these elemental service workers are about two thirds of average levels and are the lowest of any unskilled sales and service occupation.
- Employment in these occupations is moderately sensitive to overall business activity and is not seasonal.

**Current labour market conditions for elemental service workers are fairly good.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to improve somewhat over the next five years but remain fairly good.

- 96% of demand will be to replace workers who leave their existing jobs. Some 71% of the workers seeking employment in these occupations will have been previously employed in these occupations, and 22% will be school-leavers.
- While hospitals are expected to require fewer employees from this group over the next five years, strong job growth is expected in the accommodation industry. Slow job growth in the personal service industry is expected to dampen the overall employment outlook for this group.

See also: This Occupation Code: 668.  
Vol. 2 Field of Study Cross-index: U11, U22, C05, T53.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





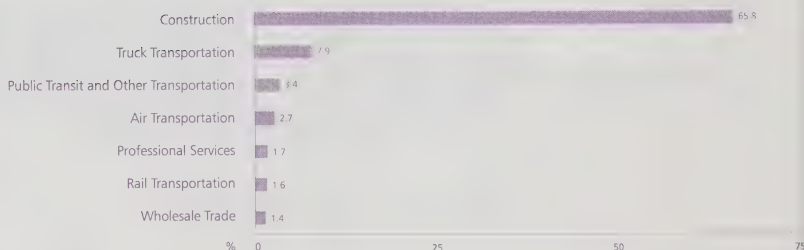
# Managers in Construction and Transportation

## At Work

These managers work in construction, transportation, freight forwarding and shipping companies, and in the transportation departments of companies in retail and manufacturing sectors and utilities.

- Construction managers plan and direct the operations of organizations engaged in residential, commercial, institutional and industrial construction.
- Residential home builders and renovators plan and direct the activities of their own companies. They prepare bids for projects, consult with customers, architects and engineers, employ subcontractors, prepare work schedules and oversee work.
- Transportation managers of operations plan and direct the operations of companies such as airlines, railways and municipal transit systems. They set policies and standards, including safety procedures for handling dangerous goods, and oversee the dispatch of vehicles, vessels and aircraft.
- Transportation managers of freight traffic plan and direct companies responsible for co-ordinating, arranging and monitoring the transportation and movement of goods.

## Where They Work



## Education, Training and Experience

These managers have different requirements depending on the area of work.

- Construction managers usually require a college diploma in construction technology or a university degree in civil engineering and several years' experience.
- Residential home builders and renovators usually need extensive experience in residential construction.
- Transportation managers of operations usually have a bachelor's degree in business administration or engineering, several years' experience including supervisory experience, and certification as commercial pilots, vessel masters or other transportation operators. Extensive experience as a supervisor and operator in a particular mode of transportation may replace formal education.
- Transportation managers of freight traffic must complete high school and may require a college diploma or university degree in business or transportation administration. They require several years' experience related to freight traffic.

## Full-Time Earnings

1993

\$58,700

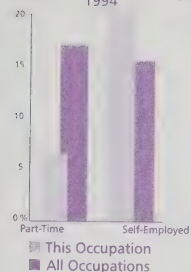
\$34,500

\$13,900

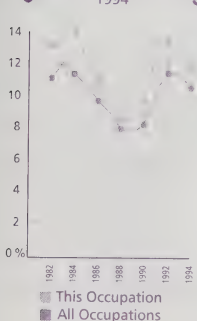
## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

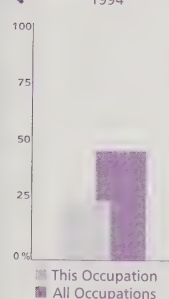
## Type of Employment



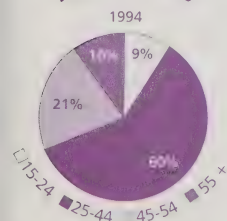
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

85,000 workers were employed in this group in 1994 — 29% more than in 1984. Employment grew by 17% economy-wide over the same period. Recent employment trends in this occupational group are favourable.

- 80% are construction managers and home builders.
- 94% work full-time, reflecting the requirements that managers be on the job during standard hours.
- The proportion of self-employed workers in this occupational group is higher than average.
- The percentage of women in these occupations is about half the average, but has increased significantly since 1984.
- There is a small proportion of young workers, indicating the work experience required for these managerial positions.
- The unemployment rate is considerably higher than the national average, while in most managerial occupations the rates are below average.
- Full-time earnings are above the national average.
- Employment in this group varies strongly with business conditions and is seasonal.

**Current labour market conditions in this occupational group are fairly good.**

## Looking to the Year 2000

Labour market conditions in these occupations will remain fairly good through the year 2000.

- Demand in these occupations is more likely to result from maintenance projects for existing infrastructure than from large, new, construction projects.
- About half of all new job creation for this group is expected to be in construction, followed by truck and public transportation. Growth in the area of professional business services is expected to be relatively strong over the next five years.

See also: This Occupation Code: 071. Related Code: 0711.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, C14, T37.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?



# Construction Managers

## At Work

Construction managers work in residential, commercial and industrial construction companies and in construction departments of companies outside the construction industry. Their duties may require them to:

- Manage construction projects from start to finish according to schedules, specifications and budgets;
- Prepare and submit construction project budget estimates;
- Prepare schedules and milestones for projects, monitor progress and issue progress reports to clients;
- Prepare contracts and negotiate changes with architects, consultants, clients, suppliers and subcontractors;
- Develop and implement quality control programs;
- Represent their companies on matters such as business services and union contract negotiations;
- Direct the purchase of building materials and land acquisitions; and
- Hire and supervise the activities of subcontractors and staff.

## Full-Time Earnings

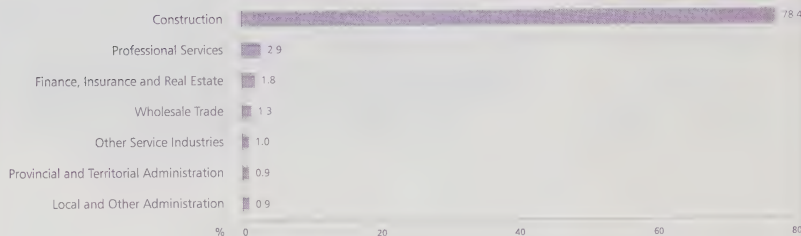
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Construction managers must usually have a university degree in civil engineering or a college diploma in construction technology as well as several years' experience in construction, including time spent as construction supervisors or field superintendents.

- If they have extensive experience in the construction industry, they may not need a college or university education.
- Some employers may require construction managers to have professional engineering status or construction trade certification.
- With experience, they may progress to senior management positions.

## About this Occupation

42,000 workers were employed in this occupation in 1994 — 34% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 94% work full-time, reflecting the working conditions which require managers to be on the job during standard hours.
- There are far fewer women in this occupation than average.
- Very few young workers are in this occupation because of the work experience required for managerial positions.
- The unemployment rate is higher than the national average, while in most other management occupations unemployment rates are lower than average.
- Full-time earnings are better than the national average reflecting the returns as a result of education and experience, and responsibilities given to managers.
- Employment in this occupation varies strongly with business conditions and is also seasonal.

**Current labour market conditions are fairly good in this occupation.**

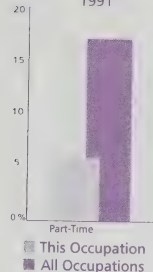
## Looking to the Year 2000

Labour market conditions in this occupation will remain fairly good through the year 2000.

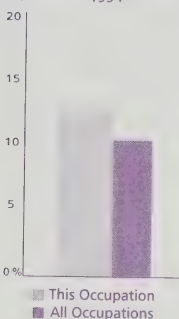
- Earnings in this occupation, for those who succeed in working year-round and full-time, are comparable to other management occupations. High turnover in construction employment means that unemployment will remain high for a managerial occupation, even without a cyclical downturn.
- The construction industry will remain the centre of job growth, for this occupation over the next five years, although the area of professional business services is expected to see rapid growth.

See also: This Occupation Code: 0711. Related Code: 071.  
Vol. 2 Field of Study Cross-index: M11, U11, U34, C12, T37.  
For further information, see List of Associations.

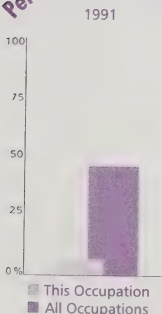
### Type of Employment



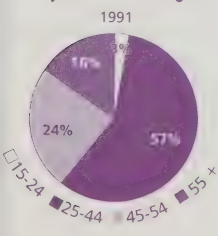
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Facility Operation and Maintenance Managers

## At Work

These managers work in airports, harbours, canals, shopping and convention centres, warehouses, office buildings, grain terminals, sports facilities, schools and universities.

- Facility operation managers plan and direct the operations of commercial, transportation and recreational facilities. They oversee the leasing of facility space, manage the facility operational budget and arrange for maintenance, parking and other facility services.
- Maintenance managers plan and direct the operations of maintenance departments within commercial, industrial, institutional, recreational and other facilities. They direct the maintenance and repair of machinery, equipment, electrical and mechanical systems, and develop safety inspection schedules.

This occupation also includes facility operation managers such as arena and marina managers, and maintenance managers such as facilities maintenance heads and mechanical, plant maintenance and maintenance and service superintendents.

## Full-Time Earnings

1993

\$82,700

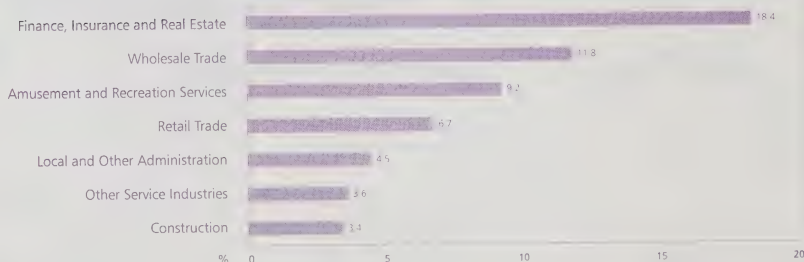
\$39,900

\$10,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$39,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These managers require postsecondary education or a combination of technical training and experience.

- Facility operation managers must complete a college or university program in business administration or in a discipline related to facility operation and maintenance, or a combination of technical training and experience in administration or maintenance. They usually require five to 10 years' experience in facility operations.
- Maintenance managers must complete a college or university program in electrical or mechanical engineering or in a discipline related to building maintenance, or a combination of technical training and building maintenance experience. They usually require several years' supervisory experience.

## About this Occupation

35,000 workers were employed in this occupation in 1994 — 32% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 90% are employed full-time, reflecting working conditions which require managers to be on the job during standard hours.
- The proportion of self-employed people is slightly less than the average of all occupations.
- There are fewer women than average in this occupation, but their share has been increasing since 1984.
- There are few young workers in this occupation, reflecting the work experience required for managerial positions.
- The unemployment rate is much less than the average.
- Full-time earnings are higher than average, showing the returns as a result of education and experience, and responsibilities given to managers.
- Employment varies with overall business conditions but is not seasonal.

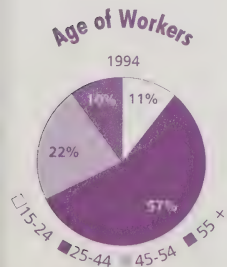
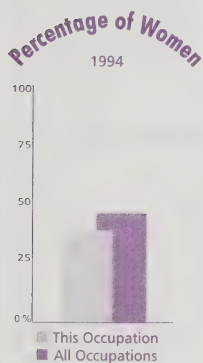
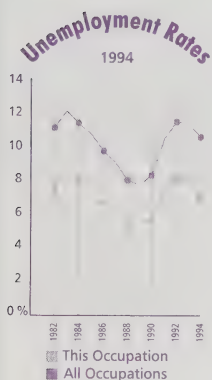
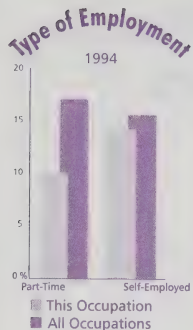
**Current labour market conditions are good in this occupation despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for this group will remain good through the year 2000.

- Competition for these jobs will be keen as experienced workers look for career advancement to these managerial positions.
- Job growth is expected to be spread over a multitude of industries, with wholesale and retail trade, and finance, insurance and real estate industries the major ones.

**See also:** This Occupation Code: 072.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U86, C14.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?



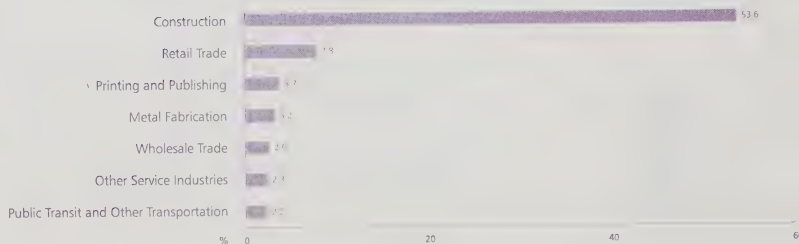
# Contractors and Supervisors, Trades and Related Workers

## At Work

These contractors and supervisors work in structural metal, platework and metal products manufacturing, fabrication and erecting, construction, printing and publishing companies, machine shops, trade contractors, and a wide range of organizations. They supervise, co-ordinate and schedule the activities of the following workers:

- Machinists, machining and tooling inspectors, and tool and die makers;
- Electricians, electrical power line and cable workers, telecommunications line and cable workers and installation and repair workers, and cable television service and maintenance technicians;
- Plumbers, steam fitters, pipefitters, sprinkler system installers and gas fitters;
- Sheet metal workers, boilermakers, structural metal and platework fabricators and fitters, ironworkers, skilled welders, blacksmiths and die setters;
- Carpenters and related workers;
- Machinery and transportation equipment, motor vehicle and other mechanics;
- Crane operators, drillers and blasters in surface mining, quarrying and construction, heavy equipment operators, longshore workers, public works maintenance equipment operators, railway track maintenance workers and water well drillers;
- Workers who produce camera work, printing plates and cylinders, process film, print text and illustrations, bind and finish printed products; and
- Masons, plasterers, construction workers, installers, repairers and servicers.

## Where They Work



## Education, Training and Experience

These contractors and supervisors usually require a high school diploma.

- They need several years' experience as a qualified tradesperson in a relevant trade.
- They may require provincial trade certification.

## Full-Time Earnings

1993

\$53,400

\$35,400

\$14,200

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

169,000 workers were employed in 1994 as trades contractors and supervisors. Employment in this occupational group grew by about 13% between the 1984 and 1994, while employment grew by 17% economy-wide over the same period. Recent employment trends in this occupational group are unfavourable.

- These contractors and supervisors are employed in a wide variety of trades.
- Only 6% of these contractors and supervisors are employed part-time, substantially less than the national average.
- 21% of these trades contractors and supervisors are self-employed, somewhat above the national average. The proportion of self-employed workers grew significantly over the last decade.
- Only 12% of the trades contractors and supervisors are women, less than a third of the average proportion in all occupations. The share of women has increased slightly over the last decade.
- There are few young workers, reflecting the trades skills and experience necessary for many of the jobs.
- The unemployment rate in this group is considerably higher than the national rate.
- Full-time earnings of trades contractors and supervisors are slightly above average levels. Earnings vary widely among the various trades.
- Employment of trades contractors and supervisors is extremely sensitive to business conditions and is highly seasonal.

**Current labour market conditions for trades contractors and supervisors are poor.**

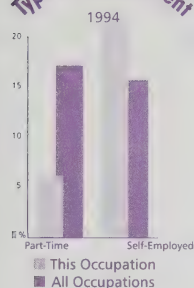
## Looking to the Year 2000

Labour market conditions for this group are expected to improve over the next five years but remain poor.

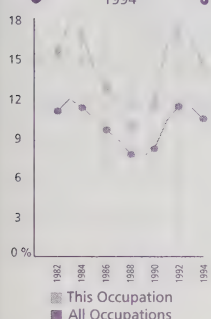
- Although job growth is expected to be slow, construction will remain the largest contributor to employment growth for this group over the next five years. The balance of employment opportunities is distributed over a multitude of industries with varying degrees of employment growth.

See also: This Occupation Code: 721.  
Vol. 2 Field of Study Cross-index: U11, T35, T37, T316, T318.  
For further information, see List of Associations.

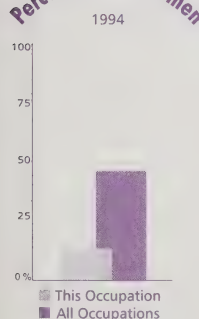
Type of Employment



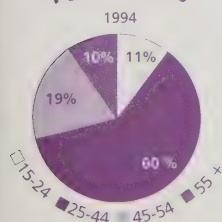
Unemployment Rates



Percentage of Women



Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Supervisors, Railway and Motor Transportation Occupations

## At Work

These supervisors work for government, railway, motor transportation and ground transit companies.

- Supervisors of railway transport operations supervise, co-ordinate and schedule the activities of workers who operate trains, drive locomotives in railway yards and perform other duties related to railway operations. They also train staff in job duties, safety procedures and company policy.
- Supervisors of motor transport and other ground transit operators supervise, co-ordinate and schedule the activities of workers who operate trucks, buses, subway trains, light rail transit, taxicabs and other transport vehicles.
- Bus dispatchers dispatch bus drivers and monitor routes to make sure that drivers meet schedules. They also resolve operating problems.
- Subway traffic controllers operate and monitor signal and track switch control panels.

## Full-Time Earnings

1993

\$54,300

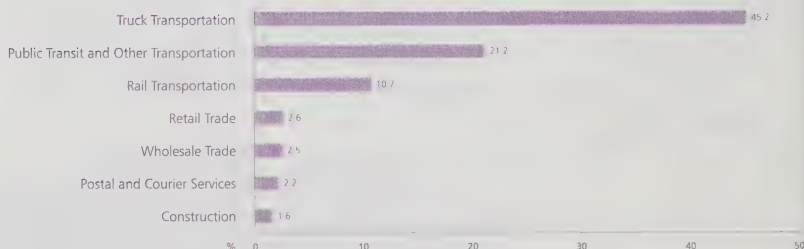
\$34,900

\$11,700

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work

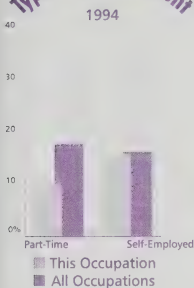


## Education, Training and Experience

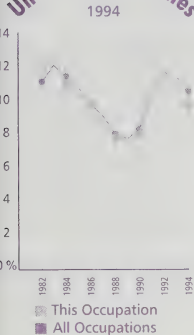
These supervisors usually must have a high school diploma.

- They usually require several years' experience in their industry, either in railway operations or as drivers of motor transport or ground transport equipment.
- Supervisors in railway transport operations require various railway operating certificates.

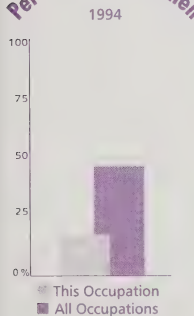
## Type of Employment



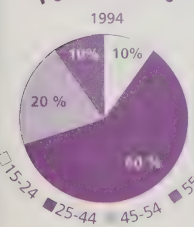
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

25,000 workers were employed as railway and motor transport supervisors in 1994. Employment in this occupational group grew by about 20% between 1984 and 1994, slightly more than economy-wide employment growth of 17% over the same period. Recent employment trends in this occupational group are favourable.

- 89% of these workers are employed as motor transport supervisors.
- 10% of railway and motor transport supervisors are employed part-time, substantially less than the national average.
- The proportion of self-employed workers in this group is at the average level for all occupations.
- About 16% of these supervisors are women, about a third of the average for women in all occupations.
- There are few young workers, reflecting the skills and experience needed in many of these jobs.
- The unemployment rate for this group is at about the national average rate.
- Full-time earnings of the railway and motor transport supervisors are at average levels.
- Employment of railway and motor transport supervisors is sensitive to overall business conditions but is not seasonal.

**Current labour market conditions for railway and motor transport supervisors are fairly good despite remaining weakness from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for these railway and motor transport supervisors are expected to improve somewhat over the next five years but remain fairly good.

- Most demand (89%) will be to replace workers who leave their existing jobs. Some 80% of the workers seeking employment in these occupations will have been previously employed in these occupations.
- Employment opportunities are expected to be concentrated in the truck transport and public transit industries as employment in rail transport declines.

See also: This Occupation Code: 722.  
Vol. 2 Field of Study Cross-index: T37, T312, T317.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Machinists and Related Occupations

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

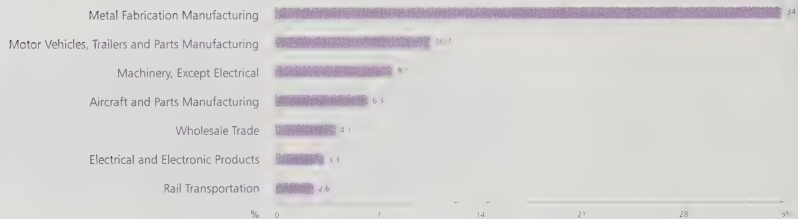
## At Work

People in this group work in machinery, equipment, motor vehicle, automotive parts, aircraft and other metal products manufacturing companies, and in machine, tool and die and mould making shops.

- Machinists set up and operate a variety of machine tools including computer numerically controlled tools to perform precision-machining operations.
- Tool and die makers make, repair and modify custom-made, prototype and special tools, dies, jigs, fixtures and gauges using a variety of machine tools and precise measuring instruments.
- Machining and tooling inspectors inspect machined parts and tooling to maintain quality control standards.

This occupational group also includes mould makers and pattern makers.

## Where They Work



## Education, Training and Experience

People in this group need some high school education.

- They can gain trade certification through apprenticeship or a combination of experience and courses in their trade.
- Trade certification is available, but may not be compulsory in some provinces and territories.
- Qualified machinists and tool and die makers may also obtain interprovincial trade certification (Red Seal) which provides for job mobility throughout the country.

## About these Occupations

56,000 people were employed as machinists and in related occupations in 1994 — a 1% decline from 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are unfavourable.

- About three quarters of these workers are machinists.
- About 2% of these workers are employed part-time, far below the national average.
- Self-employment has doubled since 1984 but remains only half the average for all occupations.
- Women make up 7% of the workers in these machinist occupations — about one sixth the national average, a proportion which has decreased somewhat over the last decade.
- There are few young workers, reflecting the training and experience required in these occupations.
- Unemployment rates for machinists and related workers are somewhat below the national rate.
- Full-time earnings of machinists and related workers are slightly above the national average for all occupations.
- Employment of machinists is very sensitive to overall business conditions but is only slightly seasonal.

**Current labour market conditions for machinists and related workers are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for machinists and related workers are expected to improve from fairly good to good over the next five years.

- Most new jobs are expected to be in the area of metal fabrication. A smaller contribution to job growth is expected from the automotive industry, electrical and electronic products, the primary resource industries and wholesale trade.

## Work Prospects

1995 to 2000

Getting Better

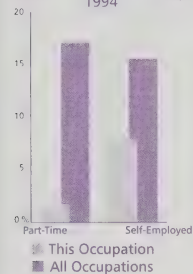
Stable

Getting Worse

How will labour market conditions change in this group?

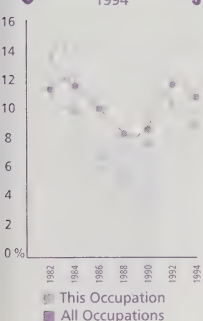
### Type of Employment

1994



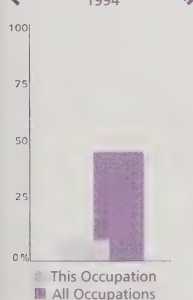
### Unemployment Rates

1994



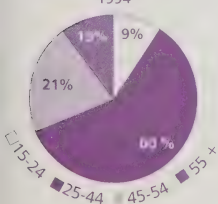
### Percentage of Women

1994



### Age of Workers

1994



See also: This Occupation Code: 723. Related Codes: 7231, 7232.  
Vol. 2 Field of Study Cross-index: C310, C312, T314, T315, T316.  
For further information, see List of Associations.





# Machinists and Machinery and Tooling Inspectors

## At Work

People in this occupation work in machinery, equipment, motor vehicle, automotive parts, aircraft and other metal products manufacturing companies, and in machine shops.

- Machinists set up and operate a wide variety of machine tools to cut or grind metal and similar materials into parts or products with precise dimensions.
- Machining and tooling inspectors inspect machined parts and tooling to maintain quality control standards.

## Where They Work



## Education, Training and Experience

People in this occupation must have some high school education. To gain trade certification, they must complete *either* a four-year apprenticeship program *or* a combination of over four years' work experience and some college or industry courses in machining.

- Trade certification is available, but not compulsory, in all provinces and territories except Quebec.
- Qualified machinists may also obtain interprovincial trade certification (Red Seal) which provides for job mobility throughout the country.
- Machining and tool inspectors must have several years' experience as machinists, tool and die makers or machining tool operators.
- With experience, people in this occupation may progress to supervisory positions.

## Full-Time Earnings

1993

\$50,400

\$34,900

\$18,900

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

41,000 people were employed as machinists and tooling inspectors in 1994 — about the same as in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- About 3% of machinists are employed part-time.
- Women account for a very small share (4%) of these workers, considerably below the national average.
- There are relatively few young workers, reflecting the training and experience these occupations require.
- The unemployment rate of machinists and tooling inspectors is somewhat less than the national average.
- Full-time earnings in this occupation are at the national average.
- Employment of machinists is very sensitive to overall business conditions but only slightly seasonal.

**Current labour market conditions for machinists and tooling inspectors are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for machinists and tooling inspectors are expected to improve from fairly good to good over the next five years.

- Employment in this occupation will remain highly sensitive to economic conditions.
- Well over half of all new jobs created are expected to be in metal fabrication. Job growth should also occur in the automotive, primary resources, electrical and electronic products and wholesale trade industries. In contrast, aircraft and parts manufacturers are expected to require fewer workers from this group.

## Work Prospects

1995 to 2000

Getting Better

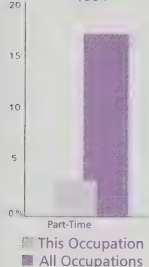
Stable

Getting Worse

How will labour market conditions change in this group?

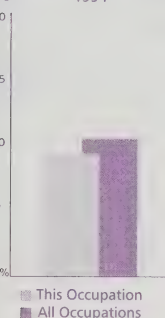
### Type of Employment

1991



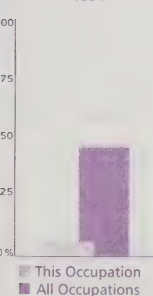
### Unemployment Rates

1994



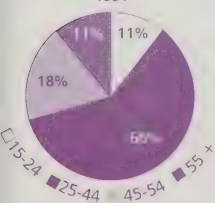
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 7231. Related Code: 723.  
Vol. 2 Field of Study Cross-index: C312, T71, T312, T314, T316.  
For further information, see List of Associations.

# Tool and Die Makers

## At Work

People in this occupation work in manufacturing industries and in tool and die, mould making and machine shops. They make, repair and modify custom-made, prototype or special tools, dies, jigs, fixtures and gauges that require precise dimensions. Their duties may require them to:

- Read and interpret drawings and specifications of tools, dies, prototypes and models;
- Operate a variety of machine tools to cut, turn, mill, plane, bore, grind and otherwise shape work pieces to prescribed dimensions;
- Machine, fit and assemble castings and other parts to make metal patterns, core boxes and match plates; and
- Machine, fit and assemble parts to make metal moulds for plastic injection moulding or other production processes.

This occupational group also includes pattern makers and metal mould makers.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this occupation need some high school education.

- To gain trade certification, tool and die makers must complete *either* a four-year tool and die making apprenticeship program *or* a combination of over five years' work experience and some high school, college or industry courses in tool and die making.
- Tool and die making trade certification is available, but not compulsory, in Nova Scotia, Ontario, Manitoba and Alberta.
- Qualified tool and die makers may also obtain interprovincial trade certification (Red Seal) which provides for job mobility throughout the country.
- Mould makers and pattern makers may need to complete apprenticeships or college programs in their area of expertise.
- Mould making and pattern making trade certification is available, but not compulsory, in Ontario.
- With experience, these workers can progress to supervisory positions.

## About this Occupation

14,000 people were employed as tool and die makers in 1994 — a 2% decline since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

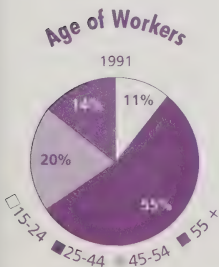
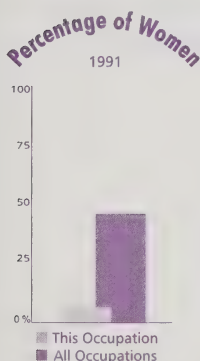
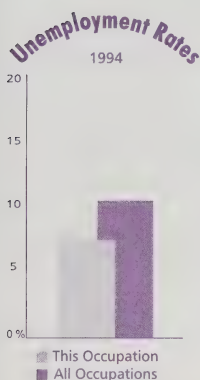
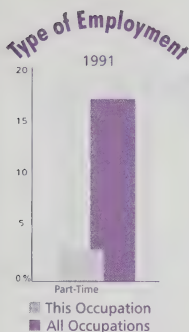
- Only 3% are employed part-time, considerably less than the national average.
- Women account for a very small share (4%) of the workers in this occupation.
- There are relatively few young workers, reflecting the training and experience these jobs require.
- The unemployment rate of tool and die makers is considerably less than the national average.
- Full-time earnings in this occupation are slightly above the national average level.
- Employment for tool and die makers is very sensitive to overall business conditions but is not seasonal.

**Current labour market conditions for tool and die makers are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for tool and die makers are expected to improve and become good over the next five years.

- Employment in this occupation will remain highly sensitive to economic conditions.
- Over 75% of the new jobs created are expected to be in metal fabrication or the automotive industry. Aircraft and parts, machinery and electrical and electronic products manufacturers are all expected to employ fewer workers from this occupation over the next five years.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

**See also:** This Occupation Code: 7232. Related Code: 723.  
Vol. 2 Field of Study Cross-index: C310, C312, T314, T315, T316.  
For further information, see List of Associations.





# Electrical Trades and Telecommunications Occupations

## At Work

People in this group work for electrical contractors, maintenance departments of buildings, factories, plants, mines and shipyards, electrical power generation, transmission and distribution and cable television companies, public utilities, telephone and other telecommunications services and organizations. They may also be self-employed. In general, they perform installing, testing, troubleshooting and repairing activities.

- Power system electricians work on electric power distribution system equipment and apparatus.
- Telecommunications line and cable workers work on lines and cables.
- Telecommunications installation and repair workers work on telephones, telephone switching and other telecommunications equipment.
- Cable television service and maintenance technicians work on cable television signal and associated equipment in buildings.
- Electrical power line and cable workers construct, maintain and repair overhead and underground electrical power transmission and distribution systems.

## Full-Time Earnings

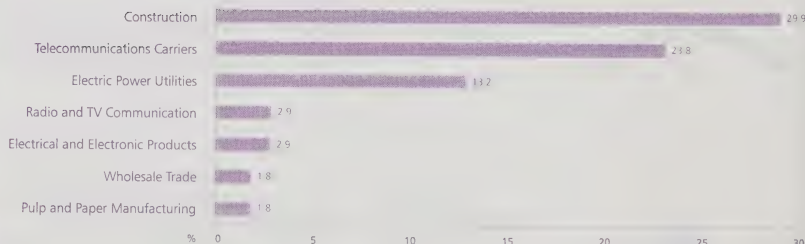
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group usually require some high school or a high school diploma.

- To gain trade certification, most people in this group usually complete an apprenticeship program or have a combination of experience and courses. Trade certification is required for some occupations in some areas of Canada.
- Qualified tradespersons may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- In some occupations, people need college or other courses in electronics and electrical technology, experience or on-the-job training or a CATV technician apprenticeship.

## About these Occupations

119,000 workers were employed in these occupations in 1994 — 7% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are unfavourable.

- 57% of these workers are electricians, and 24% are telecommunication installers and repairers.
- Only 4% of these tradespeople are employed part-time, considerably below the national average.
- Some 13% are self-employed, slightly less than the national average.
- Women account for only 9% of the workers in these occupations, considerably below the national average.
- There are few young workers, reflecting the training and experience required in these occupations.
- The unemployment rate in these occupations is at the national average.
- Full-time earnings in these occupations are above the national average for all occupations and are among the highest for skilled trades.
- Employment in this occupational group is closely linked to overall business activity but is not very seasonal.

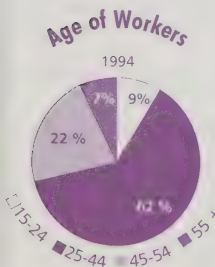
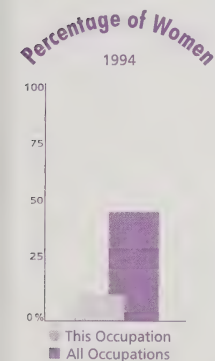
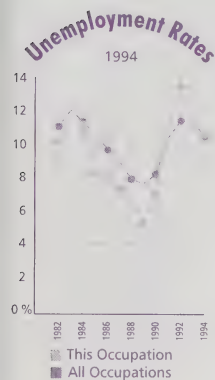
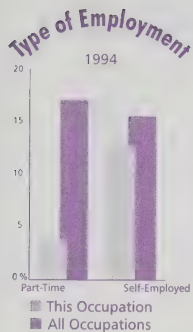
**Current labour market conditions for this occupational group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for electrical trades and telecommunication workers are expected to improve from fairly good to good over the next five years.

- Both telecommunication carriers and electric power generation are expected to reduce their requirements for workers from this group over the next five years. However, employment growth is expected in construction, the largest employer, and in electric and electronic products.

**See also:** This Occupation Code: 724. Related Codes: 7241, 7242.  
Vol. 2 Field of Study Cross-index: C38, T310.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

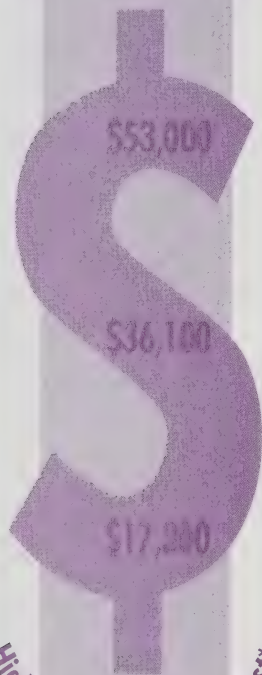
How will labour market conditions change in this group?



# Electricians (Except Industrial and Power Systems)

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

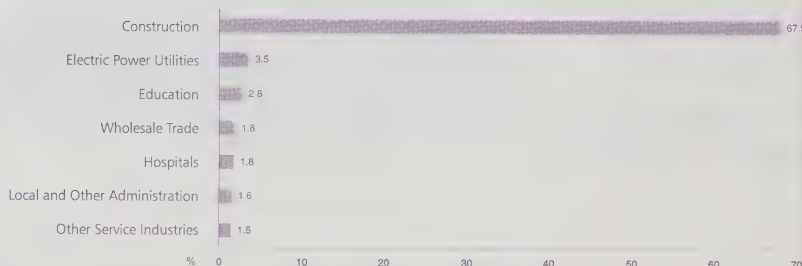
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

These electricians work for electrical contractors and maintenance departments of buildings and other organizations. They may also be self-employed. Their duties may require them to:

- Read and interpret drawings and electrical code specifications to determine wiring layouts;
- Install, replace and repair lighting fixtures and electrical control and distribution equipment such as switches, relays and circuit breaker panels;
- Connect wires to fixtures to form circuits and test circuits using test equipment to ensure compatibility and safety;
- Troubleshoot and isolate faults in electrical and electronic systems; and
- Connect electrical power to sound and visual communication equipment, signalling devices and heating and cooling systems.

## Where They Work



## Education, Training and Experience

These electricians must complete some high school.

- They must usually complete a four-to-five-year apprenticeship program.
- Trade certification is compulsory in Nova Scotia, Prince Edward Island, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan and Alberta. It is available, but voluntary, in Newfoundland, British Columbia, the Northwest Territories and the Yukon.
- Qualified electricians may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- With experience, these electricians may progress to supervisory positions.

## About this Occupation

43,000 workers were employed as electricians in 1994 — 21% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- About 5% of these electricians are employed part-time, considerably below the national average.
- Women make up only 1% of electricians, considerably below the national average.
- The age distribution of these electricians is similar to the overall work force.
- The unemployment rate in this occupation is considerably above the national rate.
- Full-time earnings are somewhat above the national average.
- Employment of electricians strongly reflects overall business conditions but is not very seasonal.

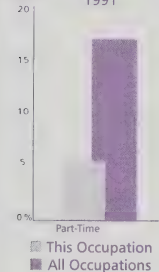
**Current labour market conditions for electricians are poor.**

## Looking to the Year 2000

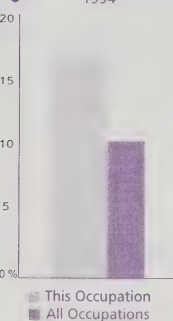
Labour market conditions for electricians are expected to improve from poor to fairly good or good over the next five years.

- Job growth is expected to be centred in construction with additional job growth expected in wholesale trade. Little employment growth for electricians is expected in electric power utilities and in education.

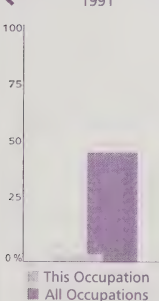
Type of Employment



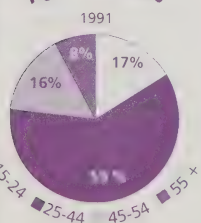
Unemployment Rates



Percentage of Women



Age of Workers



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?

See also: This Occupation Code: 7241. Related Code: 724.  
Vol. 2 Field of Study Cross-index: C31, C38, T310.  
For further information, see List of Associations.





# Industrial Electricians

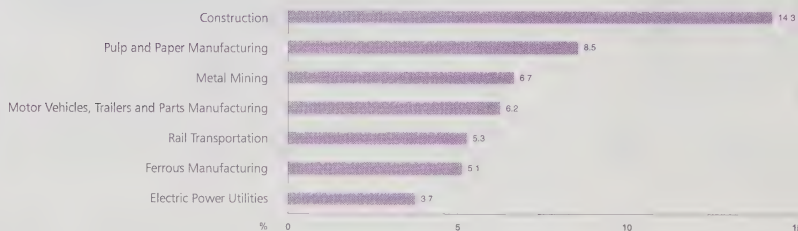
## At Work

These electricians work for electrical contractors and maintenance departments of factories, plants, mines, shipyards and other industrial establishments. Their duties may require them to:

- Read and interpret drawings and electrical code specifications to determine wiring layouts of industrial electrical equipment installations;
- Install, replace and repair electrical wiring, receptacles, switch boxes, conduits, feeders, cable assemblies, lighting fixtures and other electrical components;
- Test equipment and components for continuity, current, voltage and resistance;
- Maintain, repair, install and test switchgears, transformers, switchboard meters, regulators and reactors; and
- Maintain, repair, test and install electrical motors, generators, industrial storage batteries and hydraulic and pneumatic electrical control systems.

This occupation also includes marine, mill, mine and plant electricians.

## Where They Work



## Education, Training and Experience

Industrial electricians must complete some high school. To gain trade certification, they must usually complete either a four-year industrial electrician apprenticeship program or over five years' work experience and some high school, college or industry courses in industrial electrical equipment.

- Trade certification is compulsory in Prince Edward Island and available, but voluntary, in Newfoundland, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba and the Yukon.
- Qualified industrial electricians may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- Marine electricians in New Brunswick may have to complete a marine electrician apprenticeship program.
- Mine electricians in Nova Scotia may have to complete a mine electrician apprenticeship program.
- With experience, these electricians may progress to supervisory positions.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

20,000 workers were employed as industrial electricians in 1994 — 4% fewer than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- About 2% of industrial electricians are employed part-time, considerably below the national average.
- Only 1% of industrial electricians are women.
- There are very few young workers, reflecting the training and experience required and the low employment growth.
- Unemployment rates are below the national average.
- Full-time earnings for industrial electricians are above the national average.
- Employment of industrial electricians is moderately sensitive to overall business activity and to seasonal fluctuations.

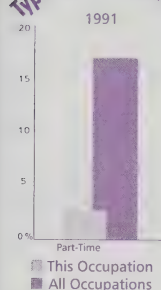
**Current labour market conditions for industrial electricians are fairly good despite remaining weakness from the 1991-92 recession.**

## Looking to the Year 2000

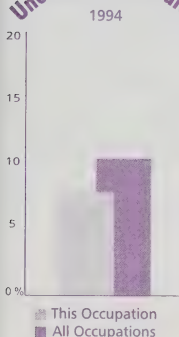
Labour market conditions for industrial electricians will improve, becoming good by the year 2000.

- Employment in this occupation is scattered over a large number of industries. However, growth is expected to be strongest in construction and the automotive industry. Overall job growth is expected to be slow, with declines in wood industries, pulp and paper and primary metal manufacturing.

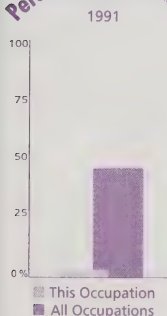
Type of Employment



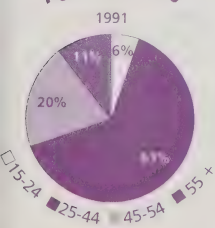
Unemployment Rates



Percentage of Women



Age of Workers



Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

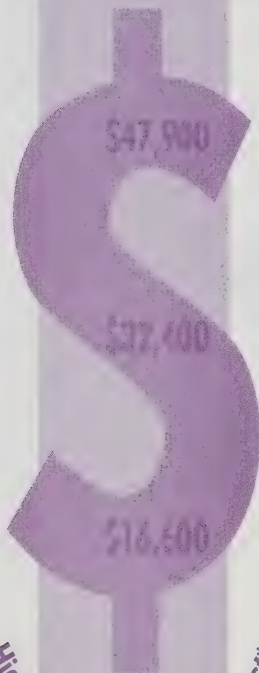
How will labour market conditions change in this group?

See also: This Occupation Code: 7242. Related Code: 724. Vol. 2 Field of Study Cross-index: C38, C311, T310. For further information, see List of Associations.

# Plumbers, Pipefitters and Gas Fitters

## Full-Time Earnings

1993



Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

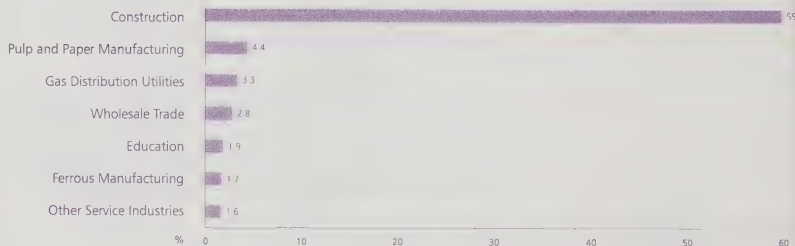
## At Work

People in this group work for maintenance departments of factories, plants and similar organizations, trade contractors, and gas utility and gas servicing companies. They may also be self-employed.

- Plumbers install, repair and maintain pipes, plumbing fixtures and other plumbing equipment for water distribution and waste water disposal in residential, commercial and industrial buildings.
- Steam fitters and pipefitters lay out, assemble, fabricate, maintain and repair piping systems carrying water, steam, chemicals and fuel in heating, cooling, lubricating and other process piping systems.
- Sprinkler system installers fabricate, install, test, maintain and repair water, foam, carbon dioxide and dry chemical fire protection sprinkler systems.
- Gas fitters install, inspect, repair and maintain gas lines, meters, gas furnaces, appliances and other gas equipment in residential, commercial and industrial buildings.

This occupational group also includes marine pipefitters and gas customer servicers.

## Where They Work

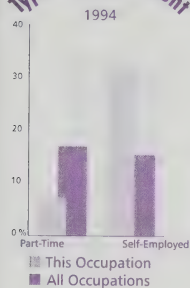


## Education, Training and Experience

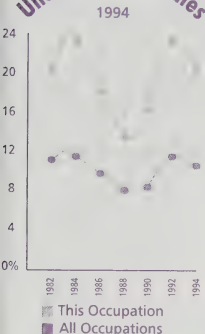
People in this group must have some high school or a high school diploma.

- To gain trade certification, people in this group must complete an apprenticeship program, or have a combination of experience and high school, college or industry courses. Trade certification may be compulsory or voluntary depending on the province or territory.
- Qualified tradespersons may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- Gas fitters require a licence in some provinces and may have restricted job mobility due to differing provincial licensing requirements.

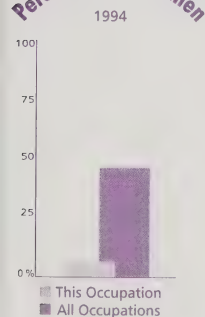
## Type of Employment



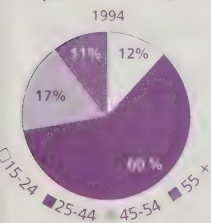
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

46,000 workers were employed as plumbers, pipefitters and gas fitters in 1994 — 16% more than in 1984, close to the 17% growth of employment economy-wide for the same period. Recent employment trends in this occupational group are unfavourable.

- Some 56% of these workers are plumbers, and 36% are steam fitters and pipefitters.
- Only 7% of these workers are employed part-time, considerably below the national average.
- About one third of these workers are self-employed, almost twice the national average.
- Women account for about 5% of the workers in these trades, considerably below the national average.
- There are relatively few young workers, reflecting the experience and training required for these jobs.
- The unemployment rate in these occupations is almost twice the national rate, typical of construction trades, but higher than skilled trades outside construction.
- Full-time earnings of plumbers, pipefitters and gas fitters are somewhat less than average levels.
- Employment in this occupational group is strongly influenced by overall business conditions and is somewhat seasonal.

**Current labour market conditions for this occupational group are very poor.**

## Looking to the Year 2000

Labour market conditions for plumbing and pipefitting trades workers are expected to improve over the next five years but remain very poor.

- Most employer demand (94%) will be to replace those workers who leave their existing jobs. Some 84% of the workers looking for employment in these trades will have been previously employed in these occupations.
- Overall job growth is expected to be slow and concentrated in construction, the largest employer for this group. Wholesale and retail trade and metal mining are also expected to contribute to job growth for this group.

See also: This Occupation Code: 725.  
Vol. 2 Field of Study Cross-index: T37, T316, T318.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





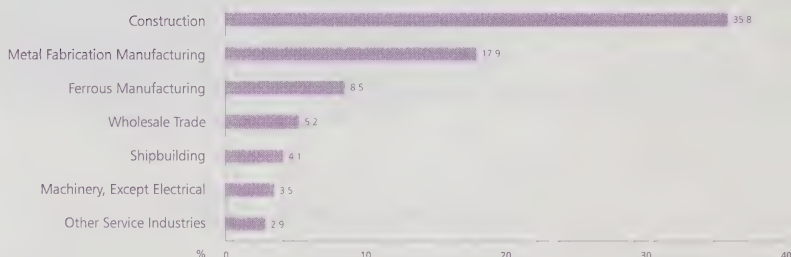
# Metal Forming, Shaping and Erecting Occupations

## At Work

People in this group work for sheet metal fabrication and welding shops, manufacturers of sheet metal and fabricated metal products, structural steel, boilers, plateworkers, aircraft, heavy machinery and transportation equipment, and sheet metal work, welding and ironwork contractors and ship building companies. They may also be self-employed.

- Sheet metal workers fabricate, assemble, install and repair sheet metal products.
- Boilermakers and structural metal and platework fabricators and fitters fabricate, assemble, erect and repair boilers, tanks, pressure vessels, platework and other heavy metal products and structures.
- Ironworkers fabricate, erect, hoist, install, repair and service structural ironwork, precast concrete, curtain walls, ornamental iron and other metals used in the construction of buildings, bridges and other structures.
- Blacksmiths forge chains, wrought iron fixtures, agricultural implements, structural components and other metal items.
- Die setters select dies and set up forging machines.

## Where They Work



## Education, Training and Experience

People in most of these occupations usually need some high school education.

- To gain certification, they must usually complete an apprenticeship or a combination of experience and trade courses. Trade certification is available in most provinces and territories.
- Qualified tradespersons may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- Blacksmiths and die setters may require a high school diploma and several years' forging machine operator experience.

## Full-Time Earnings

1993

\$50,000

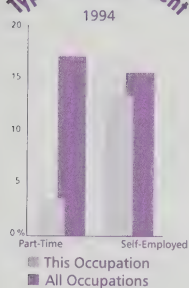
\$30,000

\$17,300

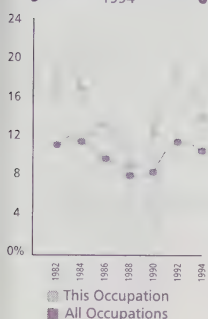
## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

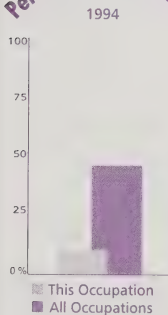
## Type of Employment



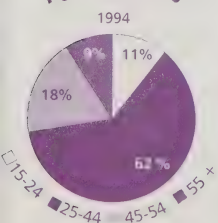
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

36,000 workers were employed in the metal forming, shaping and erecting occupations in 1994 — a 1% employment loss since 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are unfavourable.

- About half these workers are sheet metal workers.
- 96% work full-time.
- Self-employment in these occupations is slightly below the national average.
- Women account for about 8% of the workers in metal shaping and erecting trades, considerably below the national average.
- There are relatively few young workers, reflecting the experience and training required for these jobs.
- The unemployment rate is well above the national rate.
- Full-time earnings of these metal shaping and erecting tradespeople are slightly less than the average for all occupations.
- Employment in this occupational group is very closely tied to overall business activity and is also seasonal.

**Current labour market conditions for metal shaping and erecting trades are poor.**

## Looking to the Year 2000

Labour market conditions in this occupational group are expected to improve from poor to fairly good over the next five years.

- Most demand (92%) will be to replace workers who leave their existing jobs. As many as 80% of the workers seeking employment, however, will have been previously employed in these occupations.
- Job growth is expected to be slow for this group because the largest employing industries, construction and metal fabrication are expected barely to increase employment from this group over the next five years. However, more vigorous job growth is expected to occur in primary metals, shipbuilding and wholesale trade.

**See also:** This Occupation Code: 726. Related Code: 7261.  
 Vol. 2 Field of Study Cross-index: T37, T314, T315, T316, T318.  
 For further information, see List of Associations.

## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?



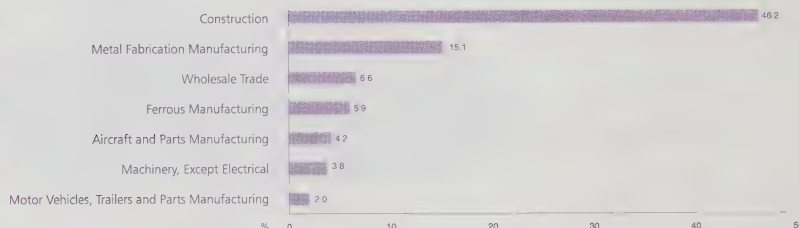
# Sheet Metal Workers

## At Work

Sheet metal workers work for sheet metal fabrication shops, sheet metal products manufacturing companies and sheet metal work contractors. Their duties may require them to:

- Lay out, measure and make sheet metal according to drawings and templates;
- Operate light metalworking machines such as shears, brakes, punches and drill presses to cut, bend, punch, drill, shape and straighten sheet metal;
- Operate laser and plasma cutting equipment to cut sheet metal;
- Fit and join sheet metal using riveting, welding, soldering and similar equipment to fabricate products such as ventilation shafts, eavestroughs, partition frames, roof decking and sheet metal buildings; and
- Inspect quality and installation to make sure that the product conforms to specifications.

## Where They Work



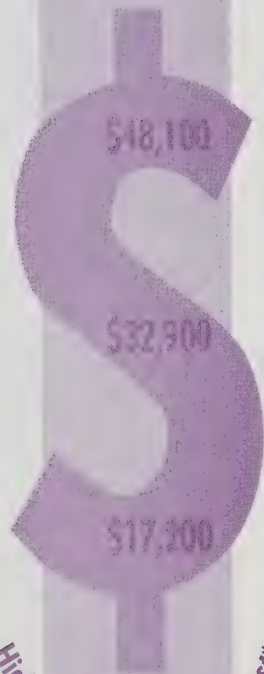
## Education, Training and Experience

Sheet metal workers must complete some high school. To obtain trade certification, they must usually complete either a three-to-four-year apprenticeship program, or a combination of over four years' work experience and some high school, college or industry courses in sheet metal working.

- Trade certification is compulsory in Quebec, Ontario, Saskatchewan, Alberta and British Columbia. It is available, but voluntary, in all other provinces and territories.
- Qualified sheet metal workers may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- With experience, sheet metal workers may progress to supervisory positions.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$32,900 is the average for all occupations.

## About this Occupation

18,000 workers were employed as sheet metal workers in 1994 — 6% lower than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are very unfavourable.

- 95% work full-time.
- Only 2% of sheet metal workers are women.
- The age distribution of sheet metal workers is very similar to the overall work force.
- The unemployment rate in this occupation is well above the national rate.
- Full-time earnings are less than average levels.
- Employment in this occupation is closely linked to overall business activity and is somewhat seasonal.

**Current labour market conditions for sheet metal workers are poor.**

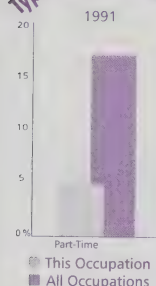
## Looking to the Year 2000

Labour market conditions in this occupation are expected to improve from poor to fairly good over the next five years.

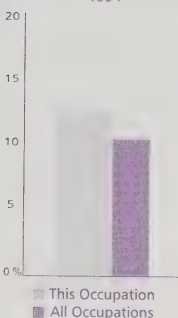
- Job growth is expected to be slow for this occupation as employment in construction and metal fabrication falls. However, more vigorous job growth is expected in primary metals, shipbuilding and wholesale trade.

See also: This Occupation Code: 7261. Related Code: 726.  
Vol. 2 Field of Study Cross-index: T312, T315, T318.  
For further information, see List of Associations.

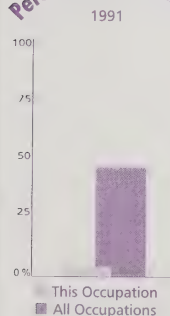
### Type of Employment



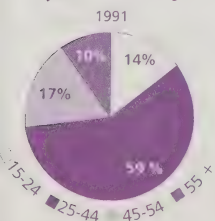
### Unemployment Rates



### Percentage of Women



### Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





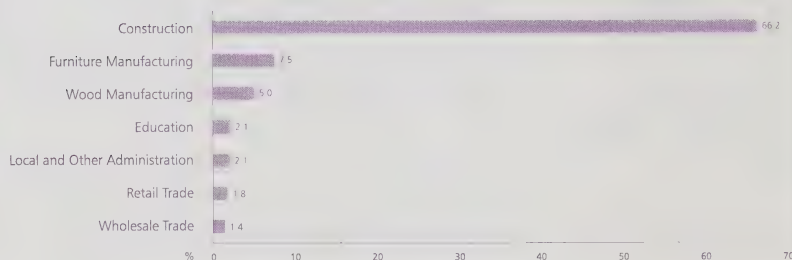
# Carpenters and Cabinetmakers

## At Work

People in this group work for construction companies, carpentry and cabinetmaking contractors, maintenance departments of factories, plants and other organizations, and for furniture manufacturing and repair companies. They may also be self-employed.

- Carpenters construct, erect, install, maintain and repair structures of wood, wood substitutes and other materials. They build foundations, install floor beams, lay subflooring, erect walls and roof systems, and fit and install doors, stairs, mouldings and other decorative work.
- Carpenters may specialize in residential, industrial or commercial construction and in finishing work, renovations and restorations, or perform rough, maintenance or general carpentry.
- Cabinetmakers construct and repair wooden cabinets, furniture, fixtures and related products. They operate woodworking machines such as power saws, jointers, mortisers and shapers, and use hand tools to cut, shape and form components and parts and apply finishes to constructed products.
- Cabinetmakers also restyle wooden furniture and fixtures and construct built-in cabinets.

## Where They Work



## Education, Training and Experience

Carpenters and cabinetmakers usually need some high school education.

- To gain trade certification, they usually have an apprenticeship or a combination of experience and some courses in their field of work.
- Trade certification is available in most provinces and territories. In Quebec, trade certification for carpenters is compulsory.
- Qualified carpenters and cabinetmakers may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.

## Full-Time Earnings

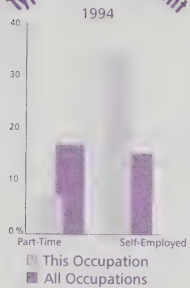
1993



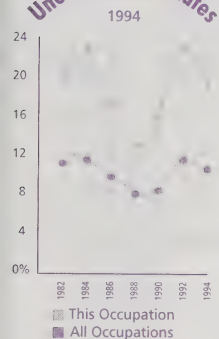
## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

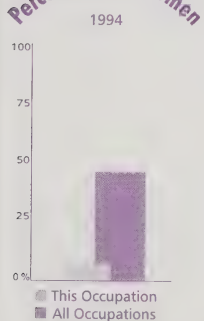
## Type of Employment



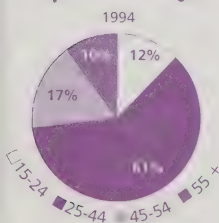
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

124,000 workers were employed in the carpentry and cabinetmaking occupations in 1994 — 22% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are favourable.

- Carpenters make up 85% of this occupational group.
- 7% of these workers are employed part-time, considerably below the national average.
- About one third of carpenters and cabinetmakers are self-employed, twice the average of all occupations.
- Women account for only 5% of the workers in this occupational group.
- There are somewhat fewer young workers than in the overall work force.
- Unemployment rates are almost double the national average, typical of construction trades, but much higher than other skilled trades outside construction.
- Full-time earnings in this occupational group are somewhat below average levels and are among the lowest for skilled trades.
- Employment in this occupational group is very closely linked to overall business activity and is also strongly seasonal.

**Current labour market conditions for the carpentry and cabinetmaking trades are very poor.**

## Looking to the Year 2000

Labour market conditions in this occupational group are expected to improve over the next five years but remain very poor.

- Most of the demand (94%) will be to replace workers who leave existing jobs. However, as much as 83% of the workers seeking employment will have been previously employed in these occupations.
- Overall job growth is expected to be slow and concentrated in construction. Furniture manufacturing, the second largest employing industry for this group, is expected to make a significant but smaller contribution to job growth.

See also: This Occupation Code: 727. Related Codes: 7271, 7272.  
Vol. 2 Field of Study Cross-index: C32, T37.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Carpenters

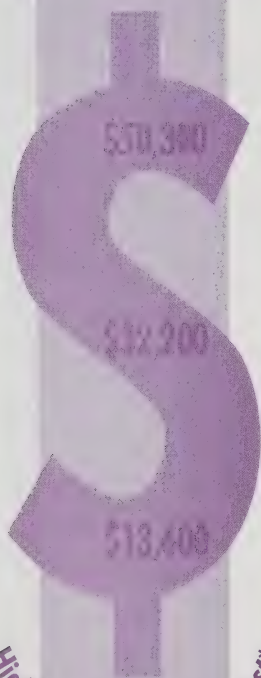
## At Work

Carpenters work for construction companies, carpentry contractors, offices, maintenance departments of factories, plants and other organizations. They may also be self-employed. Their duties may require them to:

- Read and interpret blueprints, drawings and sketches;
- Prepare layouts to conform to building codes;
- Measure, cut, shape, assemble and join materials made of wood, wood substitutes and other materials;
- Build foundations, install floor beams, lay subflooring and erect walls and roof systems;
- Fit and install trim such as doors, stairs, moulding and hardware; and
- Maintain, repair and renovate residences and wooden structures in mills, mines, hospitals, industrial plants and other organizations.

## Full-Time Earnings

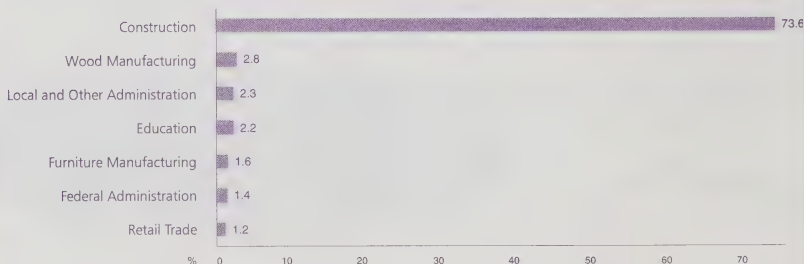
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Carpenters must usually complete some high school. To gain trade certification, they must usually complete either a three-to-four-year apprenticeship program or a combination of over four years' work experience and some high school, college or industry courses in carpentry.

- Trade certification is compulsory in Quebec and available, but voluntary, in all other provinces and territories.
- Qualified carpenters may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- With experience, carpenters may progress to supervisory positions.

## About this Occupation

106,000 workers were employed as carpenters in 1994 — 21% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- 8% of carpenters are employed part-time, considerably below the national average.
- 1% of carpenters are women.
- The age distribution of carpenters is similar to that of the overall work force.
- The unemployment rate is almost twice the national rate — typical of construction trades, but much higher than in most skilled trades outside construction.
- Full-time earnings for carpenters are below average levels.
- The demand for carpenters is closely linked to overall business activity and is extremely seasonal.

**Current labour market conditions for carpenters are very poor.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to improve over the next five years but remain very poor.

- Overall growth is expected to be slow and concentrated in construction. Stronger job growth is expected in furniture manufacturing, although the number of jobs created will be relatively small.

## Work Prospects

1995 to 2000

Getting Better

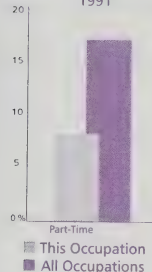
Stable

Getting Worse

How will labour market conditions change in this group?

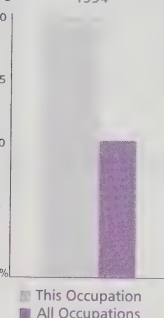
### Type of Employment

1991



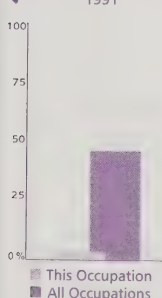
### Unemployment Rates

1994



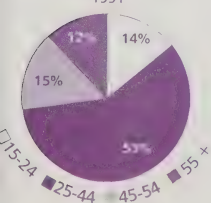
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 7271. Related Code: 727.  
Vol. 2 Field of Study Cross-index: C32, T37.  
For further information, see List of Associations.





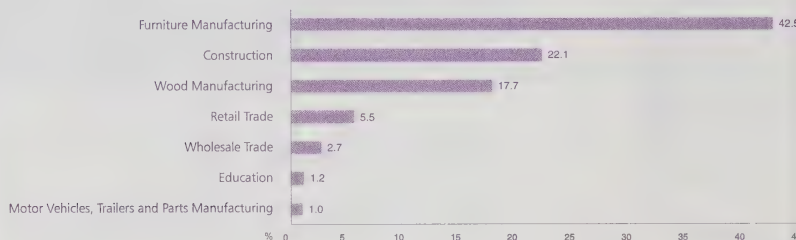
# Cabinetmakers

## At Work

Cabinetmakers work for furniture manufacturing and repair companies, construction companies and cabinetmaking contractors. They may also be self-employed. Their duties may require them to:

- Study plans, specifications and drawings, or prepare specifications;
- Operate woodworking machines such as power saws, jointers, mortisers and shapers, and use hand tools to cut, shape and form parts and components;
- Trim joints and fit parts and subassemblies together to form complete units using glue and clamps, and reinforce joints using nails, screws and other fasteners;
- Sand surfaces and apply veneer stain or polish to finished products; and
- Repair and restyle wooden furniture, fixtures and related products.

## Where They Work



## Education, Training and Experience

Cabinetmakers must usually complete some high school. To gain trade certification, they must usually complete either a three-to-four-year apprenticeship program, or a combination of over four years' work experience and some high school or college courses in cabinetmaking.

- Trade certification is available, but voluntary, in Prince Edward Island, New Brunswick, Ontario, Alberta, British Columbia, the Northwest Territories and the Yukon.
- Qualified cabinetmakers may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- With experience, cabinetmakers may progress to supervisory positions.

## Full-Time Earnings

1993

\$43,300

\$37,600

\$11,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

18,000 workers were employed as cabinetmakers in 1994 — 23% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 8% of cabinetmakers are employed part-time, considerably below the national average.
- Women make up only 5% of cabinetmakers.
- The age distribution of cabinetmakers is similar to that of the overall work force.
- The unemployment rate for this occupation is considerably above the national average.
- Full-time earnings are well below average levels.
- Employment of cabinetmakers is very closely linked to overall business activity but is only slightly seasonal.

**Current labour market conditions for cabinetmakers are poor.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to improve over the next five years but remain poor.

- Cabinetmakers are expected to experience fairly strong job growth in both furniture manufacturing and the construction industry.

## Work Prospects

1995 to 2000

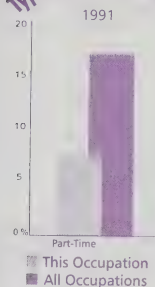
**Getting Better**

**Stable**

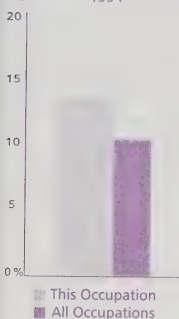
**Getting Worse**

How will labour market conditions change in this group?

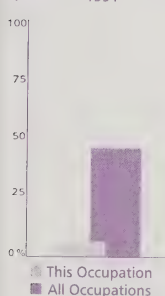
### Type of Employment



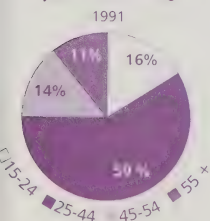
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 7272. Related Code: 727.  
Vol. 2 Field of Study Cross-index: C32, T37.  
For further information, see List of Associations.



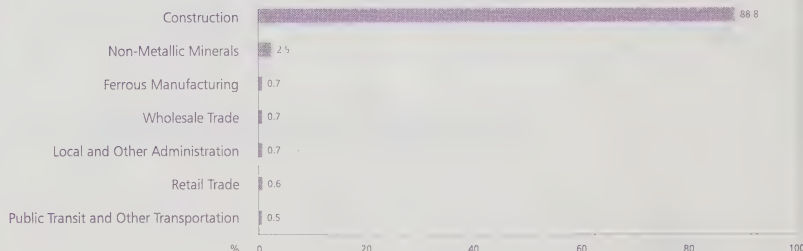
# Masonry and Plastering Trades

## At Work

People in this group work for construction companies, bricklaying, masonry, plastering, drywalling and lathing contractors, precast concrete products manufacturers and other organizations. They may also be self-employed.

- Bricklayers lay bricks, concrete blocks, stone and similar materials to construct and repair walls, foundations and other structures in residential, commercial industrial and institutional construction. They may also build patios, garden walls and other decorative installations.
- Cement masons install, finish, maintain and restore various masonry surfaces.
- Restoration masons restore various masonry surfaces.
- Tilesetters cover interior and exterior walls, floors and ceilings with ceramic, marble and quarry tile, mosaics and terrazzo. They also produce decorative wall, mural and floor designs.
- Plasterers install, finish, maintain and restore plaster or similar materials to interior and exterior walls, ceilings and building partitions to produce plain and decorative surfaces. They may spray acoustic materials over walls and ceilings.
- Drywall installers and finishers apply drywall sheets to walls and ceilings.
- Lathers install support frameworks for ceiling systems, interior and exterior walls and building partitions.

## Where They Work



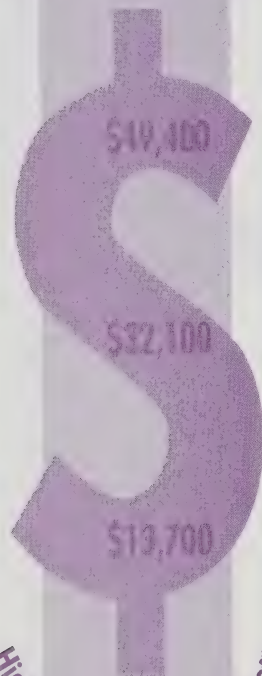
## Education, Training and Experience

People in this group require some high school education.

- To gain trade certification, they must complete a two-to-four-year apprenticeship, depending on their area of work, or a combination of three-or-four years' experience and high school, college or industry courses.
- They may require trade certification to work in their province or territory.
- Qualified bricklayers, cement masons and lathers may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

45,000 workers were employed in the masonry and plastering trades in 1994 — 18% more than in 1984, almost matching the 17% growth in employment economy-wide. Recent employment trends in this occupational group are unfavourable.

- 38% of these workers are plasterers and drywall installers, and 34% are bricklayers.
- 92% of masonry and plastering workers are employed full-time.
- 36% of these masonry and plastering workers are self-employed, more than twice the average for all occupations.
- Women make up only 4% of the workers in the masonry and plastering trades.
- Young workers are somewhat underrepresented in these occupations, in comparison with the overall work force.
- The unemployment rate for this group is about double the national average.
- Full-time earnings of masonry and plastering workers are below average levels and are among the lowest for skilled trades and skilled equipment operators.
- Employment of masonry and plastering workers is very sensitive to overall business activity and is highly seasonal.

**Current labour market conditions for this occupational group are very poor.**

## Looking to the Year 2000

Labour market conditions for masonry and plastering workers will improve over the next five years but remain very poor.

- Frequent unemployment periods due to the short-term character of most employment in these occupations means unemployment rates will remain high.
- Much of the demand in these occupations will be to replace workers who leave existing jobs. As many as 85% of those seeking employment in these occupations will have been previously employed in masonry and plastering trades.
- Employment is concentrated in construction, which is expected to generate slow employment growth for this group over the next five years.

See also: This Occupation Code: 728.  
Vol. 2 Field of Study Cross-index: C32, T37, T318.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

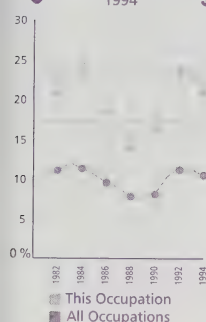
### Type of Employment

1994



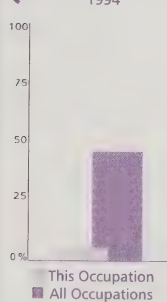
### Unemployment Rates

1994



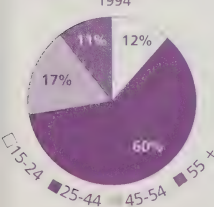
### Percentage of Women

1994



### Age of Workers

1994







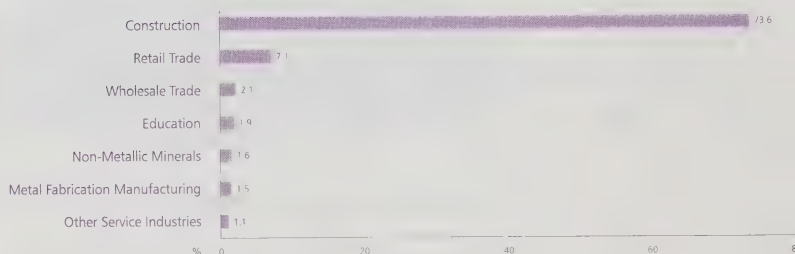
# Other Construction Trades

## At Work

People in this group work for carpet outlets, retail service and repair and glass fabrication shops, construction companies and contractors in roofing, insulation, construction glass installation, painting, floor covering and building maintenance. They may also be self-employed.

- Roofers install, repair and replace built-up roofing systems on flat roofs, and shingles, shakes and other roofing tiles on sloped roofs.
- Shinglers install or replace shingles, shakes and roofing tiles on sloped roofs.
- Glaziers prepare, install and replace glass in buildings, vehicles, furniture and other products.
- Insulators apply insulation materials to plumbing, heating, cooling and refrigeration systems, piping equipment, pressure vessels and interior surfaces of buildings to prevent or reduce the passage of heat, cold, sound and fire.
- Painters and decorators apply paint, wallpaper and other finishes to interior and exterior surfaces of buildings.
- Floor covering installers install carpet, wood, linoleum, vinyl and other resilient floor coverings, and hardwood floors including strip, block and plank floors.

## Where They Work



## Education, Training and Experience

People in this group usually require some high school education.

- Shinglers need one-to-two years' on-the-job training.
- Except for shinglers, they may require trade certification in their province or territory of work.
- To gain trade certification, they usually need an apprenticeship or a combination of experience and trade courses.
- Qualified tradespersons in this group may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

66,000 people were employed in these construction trade occupations in 1994 — an increase of 16% since 1984. Over the same period, employment rose by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- 46% of these workers are employed as painters and decorators.
- 92% of other construction trade workers work full-time.
- Almost one third of workers in these various construction trades are self-employed, about twice the average.
- Women make up only about 6% of the workers in these occupations, considerably below the average.
- 12% of the workers in these construction trades are between 15 and 24 years old, somewhat below the national average.
- The unemployment rate in this group is almost double the national average.
- Full-time earnings in these various construction trades are somewhat less than average levels.
- Employment in these construction trades is very sensitive to overall business activity and is extremely seasonal.

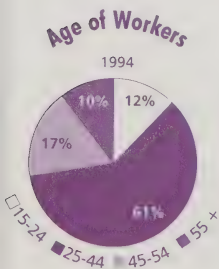
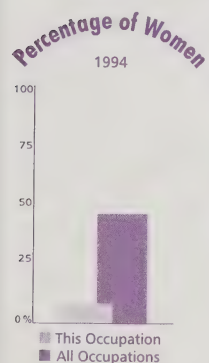
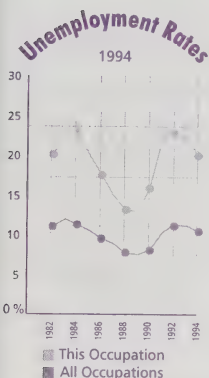
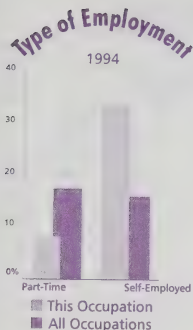
**Current labour market conditions in this occupational group are very poor.**

## Looking to the Year 2000

Labour market conditions for this group are expected to improve over the next five years but remain very poor.

- Most of the employment demand will be to replace those workers who leave their existing jobs. Employers will give preference to experienced workers, so competition will be intense among school-leavers and immigrants for new jobs.
- Very slow employment growth in construction is expected to hamper overall job opportunities for this group over the next five years. Stronger job growth is expected in retail and wholesale trade, although the number of jobs involved is small.

See also: This Occupation Code: 729.  
Vol. 2 Field of Study Cross-index: C32, T37, T316, T318.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

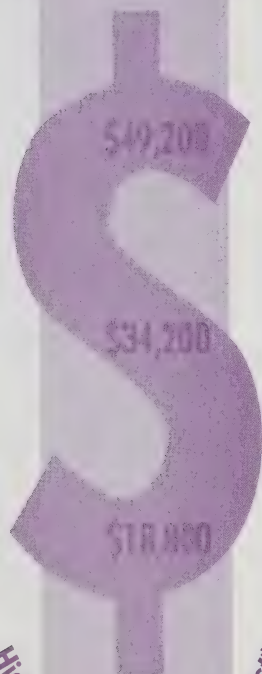
How will labour market conditions change in this group?



# Machinery and Transportation Equipment Mechanics (Except Motor Vehicle)

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

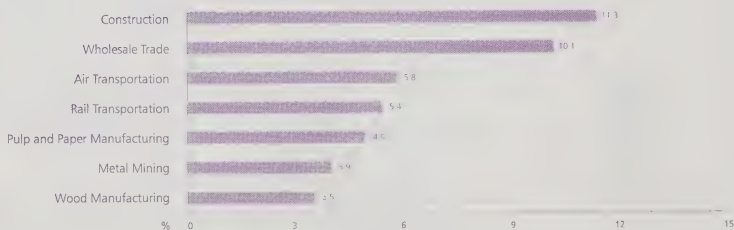
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

These mechanics work in manufacturing industries, utilities, contractors, retail organizations, railways, airlines, aircraft maintenance and overhaul companies, and other organizations.

- Construction millwrights and industrial mechanics install and repair stationary industrial machinery.
- Heavy-duty equipment mechanics repair and maintain construction, forestry, mining, material handling and other heavy equipment.
- Refrigeration and air conditioning mechanics install and repair refrigeration, central air conditioning and combined cooling and heating systems in homes, businesses and industry.
- Railway carmen/women inspect and repair railway cars.
- Aircraft mechanics maintain and repair aircraft structures and mechanical and hydraulic systems.
- Aircraft inspectors inspect aircraft and aircraft systems to ensure they meet standards.
- Machine fitters fit, assemble and build heavy industrial machinery and transportation equipment.
- Elevator constructors and mechanics install and repair freight and passenger elevators, escalators and moving walkways.

## Where They Work



## Education, Training and Experience

These mechanics require some high school or a high school diploma.

- To gain trade certification, elevator constructors and mechanics and refrigeration and air conditioning mechanics must complete an apprenticeship program or a combination of experience and formal education in their specialty.
- Railway carmen/women and machine fitters must serve an apprenticeship or have on-the-job training.

## About these Occupations

As of 1994, 147,000 people were employed in these occupations — about the same as in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are unfavourable.

- 44% work as millwrights, 28% as heavy equipment mechanics and 10% as aircraft mechanics.
- 96% of workers are employed full-time.
- The proportion of self-employed workers is well below the national average, but has been increasing in recent years.
- Women make up just 7% of the workers in these occupations.
- There are relatively few young workers in these occupations, probably because of the number of years of training and apprenticeship required.
- The unemployment rate for these occupations is below the average.
- Full-time earnings are close to the average for all occupations.
- Employment in these occupations varies with business conditions and is seasonal.

**Current labour market conditions in these occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this group will improve somewhat over the next five years, but remain fairly good.

- Overall job growth is expected to be limited with declines across a wide variety of industries. Employment for this group is not concentrated in any one industry. Industries with increased employment opportunities for this group include construction, metal fabrication, machinery and the automotive sector.

## Work Prospects

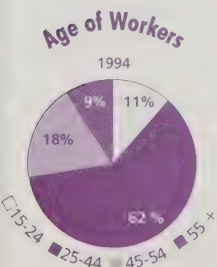
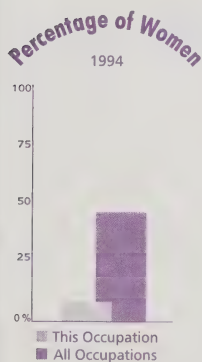
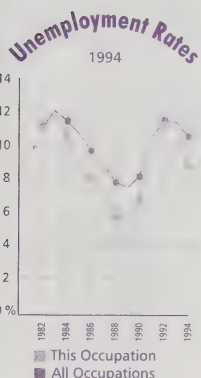
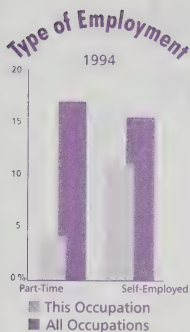
1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



**See also:** This Occupation Code: 731. Related Codes: 7311, 7312, 7315. Vol. 2 Field of Study Cross-index: C38, T35, T310, T312, T316. For further information, see List of Associations.





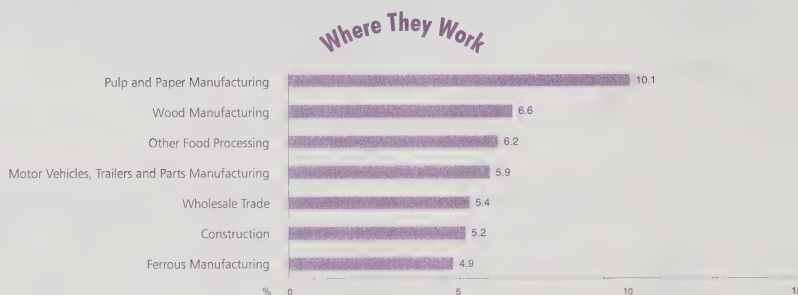
# Construction Millwrights and Industrial Mechanics (Except Textile)



## At Work

Construction millwrights are employed by millwrighting contractors and mostly do the initial installation of industrial plant equipment. Industrial mechanics work in manufacturing plants, utilities and other industrial organizations to maintain and repair equipment after installation. Their duties may require them to:

- Read diagrams and schematic drawings to determine work procedures;
- Install stationary industrial machinery and mechanical equipment according to plans;
- Operate hoisting and lifting devices to position machinery and parts during installation, set-up and repair of machinery;
- Inspect, clean, repair and maintain machinery;
- Operate machine tools such as lathes and grinders to fabricate parts for overhaul, maintenance or set-up of machinery; and
- Construct foundations for machinery or direct other workers to construct foundations.



## Education, Training and Experience

People in this group must have some high school education.

- To gain trade certification, they must usually either complete a three-to-four-year apprenticeship program or a combination of over five years' work experience in the trade in addition to some high school, college or industry courses in industrial machinery repair or millwrighting.
- Industrial mechanic trade certification is compulsory in Quebec and available, but voluntary, in all other provinces and territories.
- Construction millwright trade certification is available, but not compulsory, in New Brunswick and Ontario.
- Qualified industrial mechanics and millwrights may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- With experience, people in this group may progress to supervisory positions.

## About this Occupation

As of 1994, 65,000 workers were employed in this occupation. Employment in this occupation declined by 7% over the 1984-94 period while the economy-wide employment grew by 17%. Recent employment trends in this occupation are unfavourable.

- 97% in this occupation work full-time.
- 99% of all workers in this occupation are men.
- There are very few young workers. This reflects the need for sufficient education or an apprenticeship to acquire the requisite skills.
- The unemployment rate is marginally below the national average.
- Full-time earnings in this occupation are somewhat higher than the national average, and are higher than for any other occupation in the overall machinery and transportation equipment mechanics group.
- Employment is very sensitive to business conditions and is somewhat seasonal.

**Current labour market conditions for this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to improve somewhat over the next five years and remain fairly good.

- Demand for higher skilled workers will grow as mechanical systems become more complex, favouring those with better technical knowledge.
- Overall job growth is expected to be limited with declines in employment expected across a variety of industries notably in pulp and paper and wood industries and in primary metals. Areas where employment should increase include the automotive sector, construction, metal fabrication and machinery.

## Work Prospects

1995 to 2000

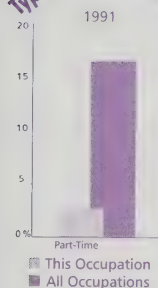
Getting Better

Stable

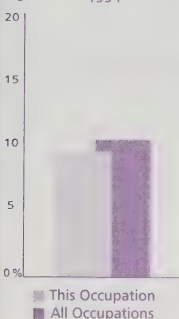
Getting Worse

How will labour market conditions change in this group?

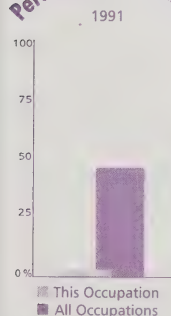
### Type of Employment



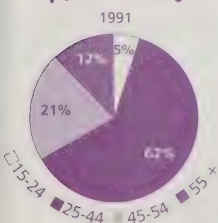
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 7311. Related Code: 731.  
Vol. 2 Field of Study Cross-index: C312, T310, T312, T314, T316.  
For further information, see List of Associations.



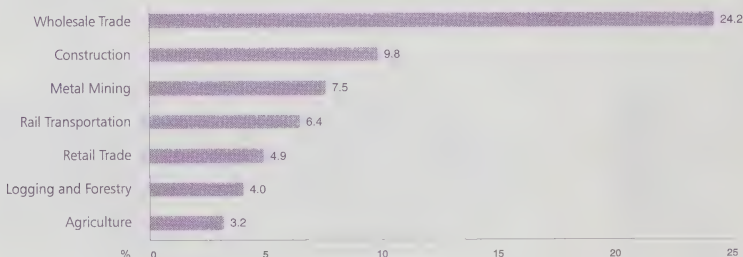
# Heavy-Duty Equipment Mechanics

## At Work

Heavy-duty equipment mechanics work for companies that use, rent or service bulldozers, cranes, graders and other heavy equipment for construction, forestry, farming, mining, material handling, landscaping, land clearing and other activities. Their duties may require them to:

- Clean, lubricate and maintain equipment; and
- Test, diagnose malfunctions and adjust or repair equipment to meet manufacturers' specifications.

## Where They Work



## Education, Training and Experience

Heavy-duty equipment mechanics must complete some high school.

- To gain trade certification, they usually either complete a four-year apprenticeship program or a combination of over four years' work experience in the trade and some high school, college or industry courses in heavy equipment repair.
- Heavy-duty equipment mechanic trade certification is compulsory in Quebec and Alberta and available, but voluntary, in all other provinces and territories.
- Farm equipment mechanic trade certification is available, but voluntary, in Prince Edward Island, Ontario, Saskatchewan and Alberta.
- Heavy equipment and farm equipment mechanics may obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- Mine equipment mechanics in Nova Scotia may have to complete a mine equipment repair apprenticeship program and trade certification.
- With experience, heavy-duty equipment mechanics may progress to supervisory positions.

## Full-Time Earnings

1993

\$49,000

\$32,800

\$17,000

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

41,000 workers were employed in this occupation in 1994. Employment declined by 5% over the 1984-94 period while economy-wide employment grew by 17%. Recent employment trends in this occupation are unfavourable.

- 97% of the workers in this occupation are employed full-time.
- There are very few women in this occupation, less than 1% of workers.
- There are few young workers, due to the apprenticeship and training requirements in this occupation.
- The unemployment rate in this occupation is lower than the average for all occupations.
- Full-time earnings are about average.
- Employment in this occupation is moderately sensitive to economic conditions and is seasonal.

**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to improve somewhat over the next five years, but remain fairly good.

- Employment growth is expected to occur in only a few industries as the total number of workers in the occupation falls slightly over the next five years. Industries where employment should increase include construction, metal mining, agriculture, logging and retail trade.

## Work Prospects

1995 to 2000

Getting Better

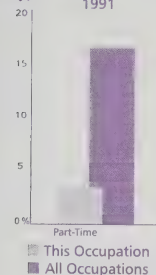
Stable

Getting Worse

How will labour market conditions change in this group?

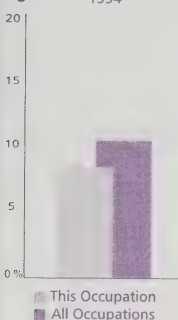
### Type of Employment

1991



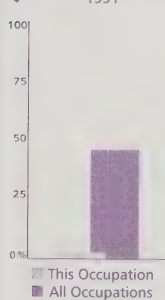
### Unemployment Rates

1994



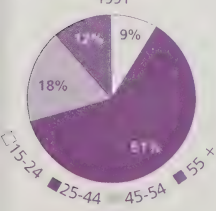
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 7312. Related Code: 731.  
Vol. 2 Field of Study Cross-index: C312, T35, T310, T312, T316.  
For further information, see List of Associations.





# Aircraft Mechanics and Aircraft Inspectors

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

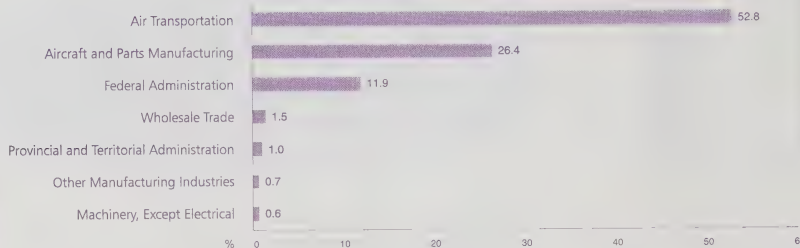
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group are employed by aircraft manufacturers, maintenance and overhaul organizations, and also by airlines and other aircraft operators.

- Aircraft mechanics install, maintain, repair and overhaul aircraft structures and mechanical and hydraulic systems. They may specialize in specific aircraft systems such as engines, airframes or hydraulic systems, particularly in large organizations.
- Aircraft inspectors inspect aircraft and aircraft systems following manufacture, modification, maintenance, repair or overhaul.

## Where They Work



## Education, Training and Experience

People in this group must complete high school.

- Completing a college program makes it easier to enter the industry.
- Aircraft mechanics must have several years' on-the-job training. Those who sign maintenance releases also require an Aircraft Maintenance Engineer's (AME) licence issued by Transport Canada.
- Aircraft mechanics may progress to supervisory positions with experience or, if they have an AME licence, to aircraft inspector.
- Aircraft inspectors need several years' experience as aircraft mechanics and an Aircraft Maintenance Engineer's (AME) licence with endorsements for specific aircraft types and aircraft systems issued by Transport Canada. They may acquire further endorsements to this licence to inspect and certify a broader range of aircraft and aircraft systems.

## About this Occupation

16,000 workers were employed in this occupation in 1994. Employment increased by 48% over the 1984-94 period while employment grew by 17% economy-wide. Recent employment trends are unfavourable.

- 97% work full-time.
- 3% of workers in this occupation are women — more than in other occupations within the broader group of machinery and transport equipment mechanics but far fewer than the national average.
- There are relatively few young workers, reflecting the need for sufficient education and an apprenticeship to acquire the requisite skills.
- The unemployment rate is much lower than the national rate.
- Full-time earnings in this occupation are somewhat lower than the all-occupation average.
- Employment is sensitive to business conditions but not seasonal.

**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for workers in this occupation are expected to improve somewhat over the next five years, and will remain good

- The demand for higher skilled workers will grow as aircraft mechanical systems become more complex.
- Two of this occupation's largest employers, aircraft and parts manufacturing, and air transport, are expected to reduce labour requirements over the next five years resulting in a decline in overall employment prospects. However, some job growth can be expected in other industries, such as federal and provincial administration, but these opportunities will be limited.

## Work Prospects

1995 to 2000

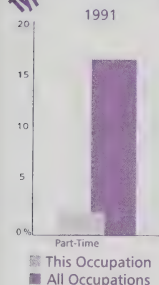
Getting Better

Stable

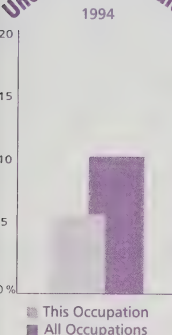
Getting Worse

How will labour market conditions change in this group?

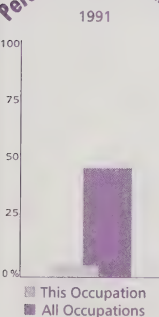
### Type of Employment



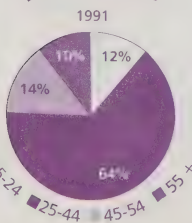
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 7315. Related Code: 731.  
Vol. 2 Field of Study Cross-index: U37, C38, T310, T312, T316.  
For further information, see List of Associations.



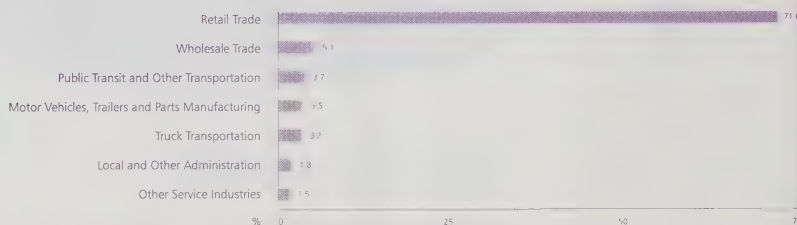
# Motor Vehicle Mechanics

## At Work

Automotive service technicians, truck and transport mechanics, mechanical repairers and motor vehicle body repairers work for motor vehicle dealers, garages and service stations, automotive specialty and retail organizations, motor vehicle manufacturers, automobile body repair companies and appraisal centres, public transit authorities and trucking firms.

- Motor vehicle mechanics and technicians inspect, diagnose, repair and service mechanical, electrical and electronic systems and components of cars, buses and trucks. They may specialize in areas such as brakes, air conditioning, cooling and heating systems, transmission systems or diagnostic services.
- Mechanical repairers inspect, repair, test and adjust mechanical units of newly assembled motor vehicles. Metal repairers repair vehicle body damage in assembly plants.
- Motor vehicle body repairers and refinishers repair and restore damaged motor vehicle parts and the interior finish of vehicles.

## Where They Work



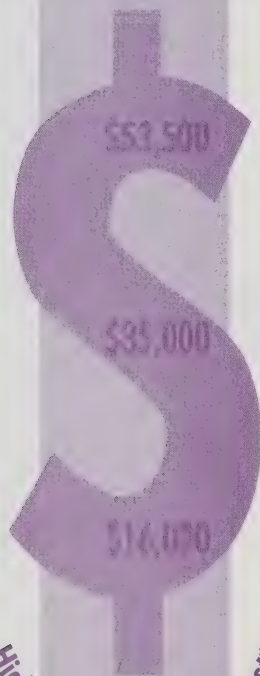
## Education, Training and Experience

People in this occupational group usually have a high school diploma.

- To gain trade certification, motor vehicle mechanics and technicians must complete either a four-year motor vehicle mechanic apprenticeship program or a combination of over four years' work experience and high school, college or industry courses in automotive technology.
- To gain trade certification, motor vehicle body repairers and refinishers usually complete a three-to-four-year apprenticeship or a combination of three years' experience and a high school or college automotive body repair program. Trade certification is compulsory in Newfoundland, Ontario and Alberta, but voluntary in most other provinces and territories.
- Qualified motor vehicle mechanics, technicians, body repairers and refinishers may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- Mechanical repairers in the motor vehicle manufacturing industry require two-to-three years' on-the-job training while motor vehicle metal repairers require one-to-two years' on-the-job training in body repair.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

163,000 workers were employed in these occupations in 1994. Employment declined by 3% over the 1984-94 period while economy-wide employment grew by 17%. Recent employment trends in these occupations are unfavourable.

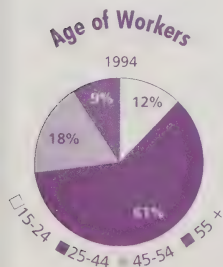
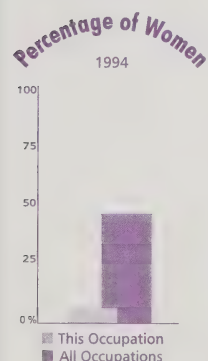
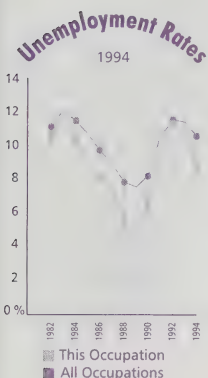
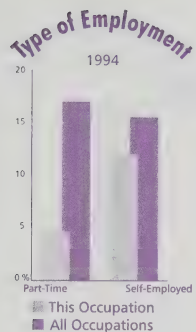
- Automotive service technicians make up 79% of this occupational group.
- 95% work full-time.
- Self-employment is somewhat below average.
- Only 5% of these mechanics are women.
- There are relatively few young workers, reflecting the need for adequate education and hands-on training to acquire the requisite skills.
- Unemployment is below the national average.
- Full-time earnings are at the national average.
- Employment varies with business conditions and is somewhat seasonal.

**Current labour market conditions in these occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupational group will remain fairly good over the next five years.

- Demand for higher skilled workers will grow as automotive systems become more complex (e.g., computerized electronics), favouring certified mechanics and those with higher technical knowledge, acquired mostly through apprenticeship.
- Retail trade should continue to be the major job generator for this group over the next five years, although overall growth is expected to be slow. The motor vehicle and parts industry is also expected to require more workers as are most other industries related to the transportation industry.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 732. Related Code: 7321.  
Vol. 2 Field of Study Cross-index: C312, T35, T312, T316.  
For further information, see List of Associations.





# Motor Vehicle Mechanics, Technicians and Mechanical Repairers

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

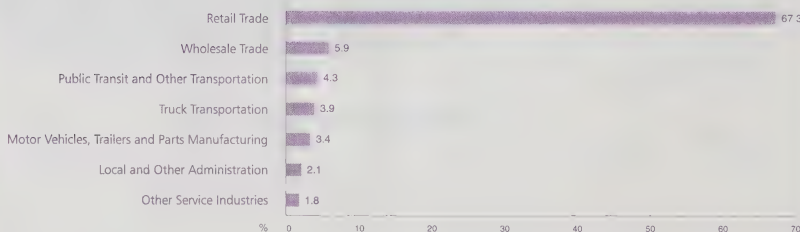
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

Automotive service technicians and truck and transport mechanics are employed by motor vehicle dealers, garages and service stations, automotive specialty shops, public transit authorities and trucking firms. Mechanical repairers are employed by motor vehicle manufacturing companies.

- Motor vehicle mechanics and technicians inspect, diagnose, repair and service mechanical, electrical and electronic systems and components of cars, buses and trucks and may specialize in specific motor vehicle systems.
- Mechanical repairers perform major repairs and replacement of mechanical units on newly assembled motor vehicles.

## Where They Work



## Education, Training and Experience

People in this occupation must usually complete high school.

- To gain trade certification, motor vehicle mechanics and technicians must complete *either* a four-year motor vehicle mechanic apprenticeship program or a combination of over four years' work experience and courses in automotive technology.
- Automotive service technicians trade certification is compulsory in Newfoundland, Nova Scotia, Prince Edward Island, New Brunswick, Ontario and Alberta. It is available, but voluntary, in most other provinces.
- Truck and transport mechanic trade certification is compulsory in Nova Scotia and available, but voluntary, in Prince Edward Island, New Brunswick, Saskatchewan and British Columbia.
- Qualified motor vehicle mechanics and automotive service technicians may obtain interprovincial trade certification (Red Seal) which provides for job mobility throughout the country.
- Mechanical repairers usually receive two-to-three years' on-the-job training.

## About this Occupation

128,000 workers were employed in this occupation as of 1994 — 3% fewer than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- 96% work full-time.
- There are very few female workers in this occupation.
- Slightly more young workers are employed here than average.
- The unemployment rate is below the national average.
- Full-time earnings are about average.
- Employment is sensitive to business conditions and seasonal fluctuations.

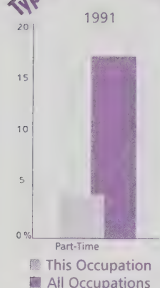
**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

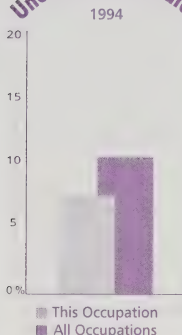
Labour market conditions for workers in this occupation will remain fairly good through the year 2000.

- Demand for higher-skilled workers will grow as automotive systems become more complex (for example, computerized electronics), favouring *certified* mechanics and those with higher technical knowledge, acquired mostly through apprenticeship.
- Retail trade and the motor vehicle industry will provide most of the job opportunities over the next five years, while employment related to wholesale trade and public transit grows slowly, and that related to truck transport declines.

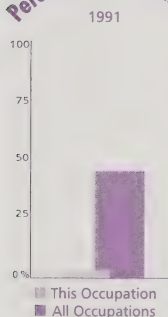
Type of Employment



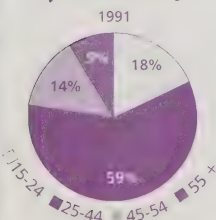
Unemployment Rates



Percentage of Women



Age of Workers



Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 7321. Related Code: 732.  
Vol. 2 Field of Study Cross-index: C12, T34, T35, T312, T316.  
For further information, see List of Associations.

# Other Mechanics

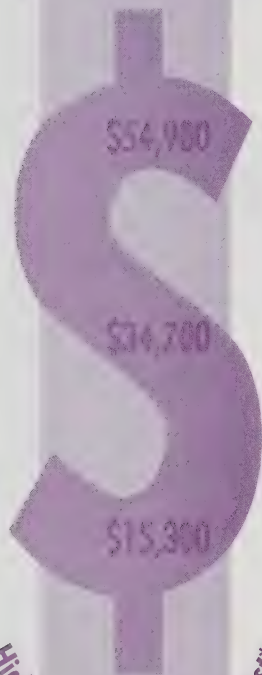
## At Work

These mechanics work in heating systems installation and service companies, appliance service companies, electrical and other repair shops, electrical equipment manufacturers service shops, maintenance and repair departments of retail, wholesale and manufacturing companies, motorcycle dealers and independent service organizations.

- Oil and solid fuel heating mechanics install and maintain oil, coal and wood heating systems in residential and commercial buildings.
- Electric appliance servicers and repairers service and repair domestic appliances.
- Electrical mechanics maintain, test and repair electric motors, transformers, switchgears and other electrical apparatus. They may specialize in particular functions or products.
- Motorcycle and other related mechanics test, repair and service motorcycles, snowmobiles, forklifts and similar vehicles.
- Other small-engine and equipment mechanics test, repair and service small gasoline- and diesel-powered equipment such as outboard motors and lawn mowers.

## Full-Time Earnings

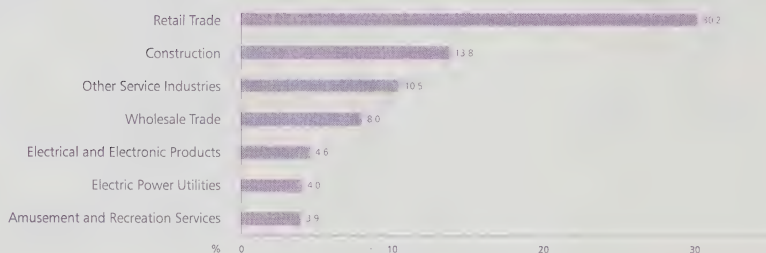
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group usually need some high school or a high school diploma.

- To gain trade certification, oil and solid fuel heating, electrical, motorcycle, small-engine and equipment mechanics and repairers usually have a three-to-four-year apprenticeship or a combination of experience and college or other courses.
- They may need trade certification in their province of work.
- Qualified oil and solid fuel heating mechanics may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- Small appliance repairers and other small-engine and equipment mechanics usually require on-the-job training and college or other courses.

## About these Occupations

33,000 people were employed in these occupations in 1994. Employment decreased 1% from 1984 to 1994, while economy-wide employment increased by 17%. Recent employment trends in this occupational group are unfavourable.

- 64% are mechanics for electrical appliances or electronics.
- 95% work full-time.
- The proportion of self-employed workers is about average and is growing.
- The percentage of women workers in this group is less than a third of the average for all occupations.
- There are relatively few young workers, reflecting the need for training and experience in these occupations.
- The unemployment rate is about average.
- Full-time earnings are at average levels.
- Employment in this group varies with economic conditions and is somewhat seasonal.

**Current labour market conditions in these occupations are fairly good despite remaining weakness from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for this occupational group are expected to improve from fairly good to good over the next five years.

- The strength of the domestic economy will be key to job prospects for this group, whose services are primarily focussed on household demand.
- Although employment is distributed over a wide variety of industries, most new jobs are expected to be created in the construction industry as well as in retail and wholesale trade.

## Work Prospects

1995 to 2000

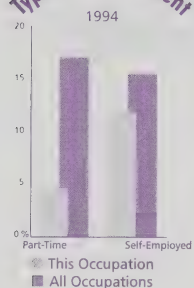
Getting Better

Stable

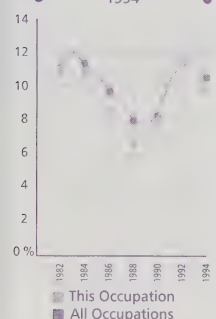
Getting Worse

How will labour market conditions change in this group?

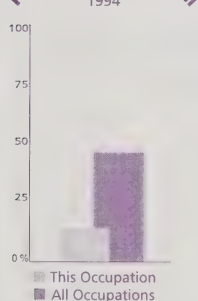
### Type of Employment



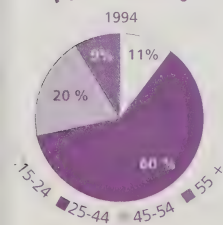
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 733.  
Vol. 2 Field of Study Cross-index: C38, T35, T310, T316.  
For further information, see List of Associations.





# Upholsterers, Tailors, Shoe Repairers, Jewellers and Related Occupations

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

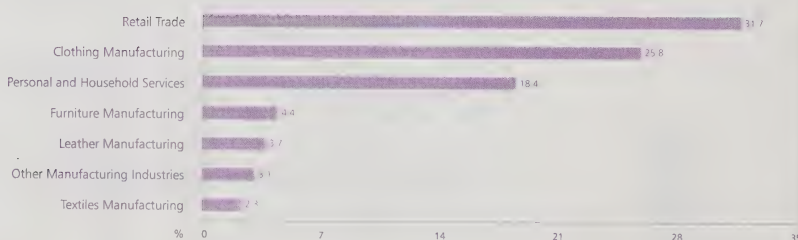
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$24,900 is the average for all occupations.

## At Work

People in this group work in furniture, aircraft, motor vehicle, garment, jewellery, clock and watch manufacturing companies and in furniture repair shops, retailers, clothing alteration shops, shoe, jewellery and watch repair shops and in custom shoemaking establishments. They may also be self-employed.

- Upholsterers cover furniture, fixtures and other items with materials, and install upholstery in aircraft, motor vehicles, railway cars and marine vessels.
- Tailors and dressmakers make made-to-measure garments and alter and repair garments.
- Furriers make, restyle and repair natural fur garments and accessories.
- Milliners design and make hats and related accessories.
- Seamstresses make alterations and repairs to garments and other items.
- Shoemakers make specialized custom shoes and boots.
- Shoe repairers repair footwear, purses, luggage and other items.
- Jewellers fabricate, assemble and appraise fine jewellery and other items.
- Watch repairers mend watches and make clocks and watches.

## Where They Work



## Education, Training and Experience

People in these occupations usually require some high school education or a high school diploma.

- They may need college or other courses in their field, an apprenticeship, several years' experience, on-the-job training or demonstrated sewing and creative skills.
- Furriers require several years' experience in selecting pelts.
- Shoemakers must have extensive on-the-job training.
- Watch repairers require certification in Quebec and Ontario.

## About these Occupations

50,000 workers were employed in this group as of 1994 — a 13% decrease since 1984. Employment grew by 17% economy-wide over the same period. Recent employment trends are very unfavourable.

- Nearly two thirds of these workers are tailors and dressmakers.
- 91% work full-time.
- Self-employment has grown over the last 10 years and is now at the average level for all occupations.
- Women make up two thirds of all workers in these occupations.
- There are relatively few young workers in this group, probably because of declining employment.
- Unemployment is well above the national average.
- Full-time earnings are less than two thirds of the national average.
- Employment is sensitive to business conditions but is not seasonal.

**Current labour market conditions in this occupational group are poor.**

## Looking to the Year 2000

Labour market conditions in this group will improve to fairly good over the next five years.

- Some improvement will occur as workers in these occupations retire or move to other occupations.
- Immigrants will continue to be an important source of workers for these occupations.
- Most job opportunities will be in personal services and wholesale and retail trade. The clothing and furniture industries are expected to employ fewer workers in this group over the next five years.

## Work Prospects

1995 to 2000

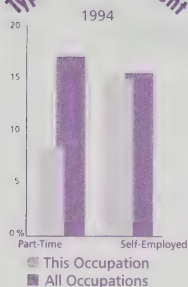
Getting Better

Stable

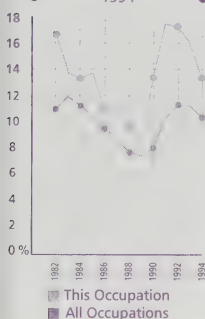
Getting Worse

How will labour market conditions change in this group?

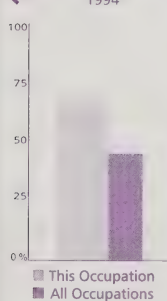
### Type of Employment



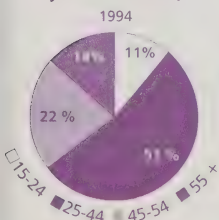
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 734.  
Vol. 2 Field of Study Cross-index: U01, U11, C03.  
For further information, see List of Associations.



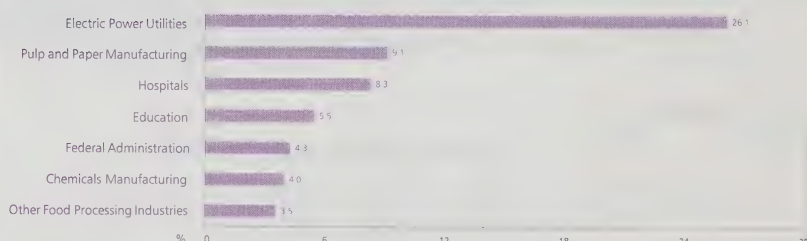
# Stationary Engineers and Power Station and System Operators

## At Work

People in this group work in industrial and manufacturing plants, hospitals, universities, government and commercial organizations, electric power utilities and large manufacturing facilities.

- Stationary engineers and auxiliary equipment operators maintain and operate stationary engines and auxiliary equipment such as boilers, turbines, generators, compressors, and other equipment to provide heat, ventilation, refrigeration, light and power for buildings and industrial plants.
- Power system operators monitor and operate computerized or pneumatically controlled switchboards and auxiliary equipment in electrical control centres to control and regulate electrical power in transmission networks.
- Power station operators run reactors, turbines, boilers, generators, condensers and auxiliary equipment in hydro, thermal and nuclear power plants to generate electric power.

## Where They Work



## Education, Training and Experience

People in this group usually have a high school diploma and specialized training.

- Stationary engineers and auxiliary equipment operators must complete an apprenticeship program in stationary or power engineering, or on-the-job training and high school courses, or a college training program in stationary or power engineering. They also require provincial or territorial certification.
- Power systems operators must complete a three-to-five year apprenticeship or have more than three years' experience and some college or industry courses in electrical and electronic technology.
- Power station operators must complete an apprenticeship in stationary or power engineering, or have several years' experience and some high school, correspondence or college courses in stationary or power engineering. They also require provincial or territorial certification.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

29,000 workers were employed in this group as of 1994 — 12% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this group are unfavourable.

- Three quarters work as stationary engineers.
- 98% work full-time.
- There is very little self-employment.
- Only 7% of workers are women — far fewer than the average of all occupations.
- There are very few young workers because of the training and apprenticeship needed to acquire the requisite skills.
- The rate of unemployment is well below the national average, in fact, among the lowest for skilled trades.
- Full-time earnings are above the national average and are among the highest for skilled trades.
- Employment fluctuates with business conditions and is somewhat sensitive to seasonal fluctuations.

**Current labour market conditions for this group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for workers in this group will worsen from good to fairly good over the next five years.

- Electric power, construction, mining and professional business services are areas that should provide job growth for this group over the next five years, although overall employment growth is expected to remain weak.

## Work Prospects

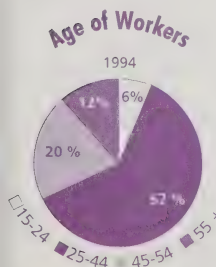
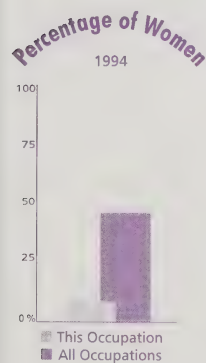
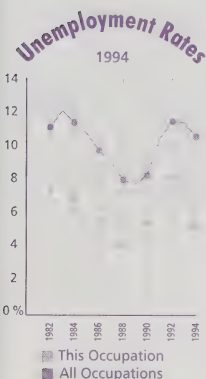
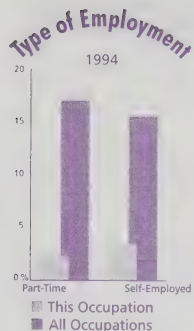
1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



See also: This Occupation Code: 735.  
Vol. 2 Field of Study Cross-index: U35, U37, C312, T316.  
For further information, see List of Associations.





# Train Crew Operating Occupations

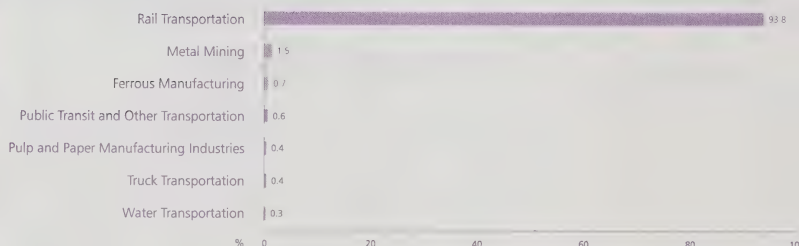
## At Work

People in this group work for railway transport companies and industrial and commercial users of rail transport.

- Railway locomotive engineers transport passengers and freight on railways. They operate communication systems to communicate with train crews and railway traffic controllers to ensure that trains operate safely and meet their schedules.
- Yard locomotive engineers switch, couple and uncouple cars for loading and unloading goods within the yards of railway, industrial and other organizations.
- Railway conductors co-ordinate and supervise the activities of passenger and freight crew members, except for railway locomotive engineers, to ensure that trains operate according to schedules, orders and operating rules. They also collect fares, announce train stops and answer passengers' questions.
- Railway brakemen/women check train brakes and other systems and equipment prior to train runs and assist railway conductors in activities en route.

This occupational group also includes railway hostlers, switch engineers, freight, passenger and railway conductors, and road freight, front-end and tail-end brakemen/women.

## Where They Work



## Education, Training and Experience

People in this group usually need a high school diploma.

- Except for yard locomotive engineers, they require specific levels of the Certificate of the Canadian Rail Operating Rules.
- Railway locomotive engineers must have experience as railway conductors.
- Yard locomotive engineers may need experience as railway conductors or railway yard workers.
- Railway conductors must have experience as railway brakemen or brakewomen.
- Railway brakemen/women usually require experience as railway workers.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings at the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

15,000 were employed in train crew operating occupations in 1994, 4% more than in 1984. Over the same period, economy-wide employment rose by 17%. Recent employment trends in this occupational group are unfavourable.

- About half are employed as railway and yard locomotive engineers, and about half as railway conductors and brakemen/women.
- 98% work full-time.
- Almost none are self-employed.
- Women make up 8% of workers in train crew operating occupations.
- There are very few young workers, probably due to slow employment growth.
- Unemployment is extremely low due to low turnover.
- Full-time earnings are much higher than average and have risen relative to average levels over the last 10 years. Earnings are the highest among the skilled trades.
- Employment is seasonal and is mildly affected by the business cycle.

**Current labour market conditions in these occupations are poor.**

## Looking to the Year 2000

Over the next five years, labour market conditions are expected to improve, but remain poor, due to much of the current work force leaving the occupational group.

- 95% of this group work in the rail industry, which is expected to employ fewer workers from this group over the next five years. Prospects for new workers obtaining jobs in these occupations are poor.
- Continued uncertainty surrounds the rail industry as rail lines are abandoned and rail subsidies to producers are altered by domestic policy or as a result of international trade agreements.

## Work Prospects

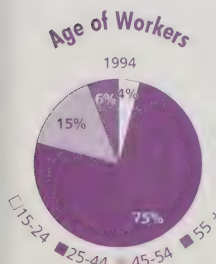
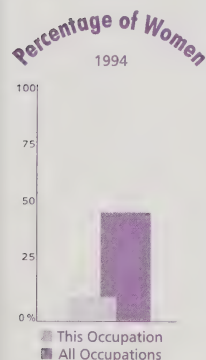
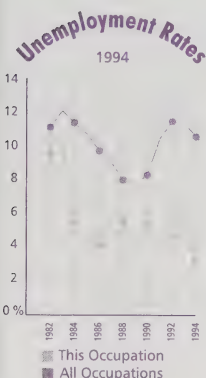
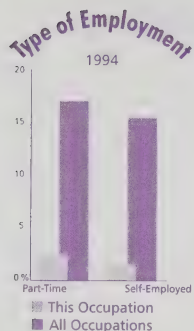
1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



See also: This Occupation Code: 736.  
Vol. 2 Field of Study Cross-index: U34, U36, C64, T314.  
For further information, see List of Associations.



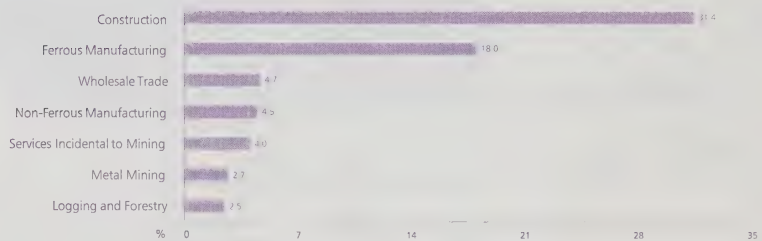
# Crane Operators, Drillers and Blasters

## At Work

People in this group work for government and construction, mining, quarrying, industrial, cargo handling and railway companies and contractors. They may also be self-employed.

- Crane operators use cranes and draglines to lift and place machinery and other large objects at work sites.
- Drillers operate mobile drilling machines to bore blast holes in open-pit mines and quarries and during the construction of building foundations.
- Blasters place explosives in blast holes and detonate explosives to dislodge coal, ore and rock and to demolish structures.
- Water well drillers operate mobile well drilling rigs and equipment to drill residential, commercial and industrial water wells.

## Where They Work



## Education, Training and Experience

People in this group usually have some high school education.

- Crane operators require an apprenticeship of one to three years or crane operation courses.
- In some provinces, crane, boom truck, mobile and tower crane operators require trade certification.
- Mobile crane operators may require a licence to drive on public roads. If they have trade certification, they may also obtain interprovincial trade certification (Red Seal) which provides for job mobility throughout the country.
- Drillers may require heavy equipment operator experience and on-the-job training.
- Blasters usually require a blasting licence and may need experience as blaster helpers in surface mining and quarrying. They usually get on-the-job training.
- To gain trade certification, water well drillers require a two to three year apprenticeship or two to three years' experience with trade courses.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

22,000 workers were employed in this group in 1994. Employment grew by 4% between 1984 and 1994. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are unfavourable.

- Three quarters work as crane operators.
- There are somewhat fewer part-time workers than in other occupations.
- The proportion of self-employment is about a quarter of the national average.
- The proportion of women is about a third of the average.
- There are more workers between 15 and 24 years of age than average, reflecting the relative importance of physical ability and the low level of education required.
- Unemployment is much higher than the national average and among the highest for skilled trades.
- Full-time earnings are slightly below the national average.
- Employment is highly sensitive both to business conditions and to seasonal fluctuations.

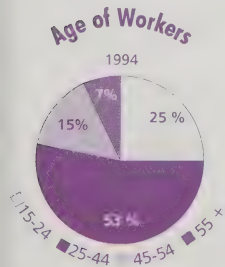
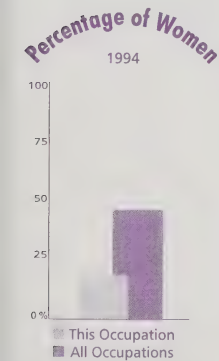
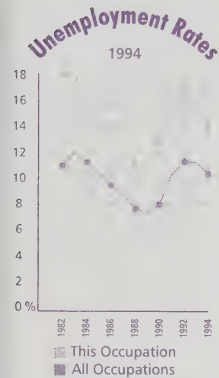
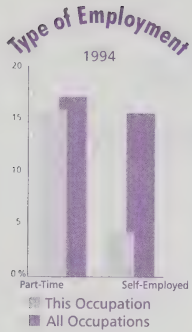
**Current labour market conditions in this group are poor.**

## Looking to the Year 2000

Labour market conditions for workers in these occupations will improve somewhat over the next five years, but will remain poor.

- Construction will remain the major source of new jobs for this group as employment opportunities in the primary sector decline.

See also: This Occupation Code: 737.  
Vol. 2 Field of Study Cross-index: C64, T312, T316.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Printing Press Operators, Commercial Divers and Other Trades and Related Occupations

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

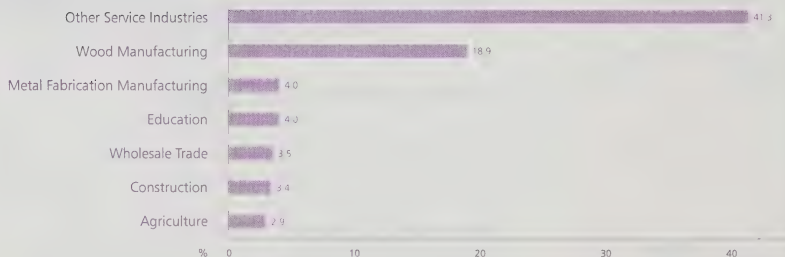
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

Commercial divers work for commercial diving contractors, shipping and marine construction companies, oil and gas companies and other organizations. Workers in other trades are employed by a wide range of organizations. People in this group may also be self-employed.

- Commercial divers conduct underwater surveys, non-destructive testing, blasting and welding activities. They operate underwater videos, sonar, recording and other equipment, and perform search and rescue activities. They may supervise and train other divers.
- Gunsmiths fabricate guns and repair and modify firearms.
- Locksmiths make keys and repair, install, adjust and change locks.
- Safe and vault servicers install, repair and maintain safes and vaults.
- Saw fitters repair, set and sharpen bandsaws and other types of saws.

## Where They Work



## Education, Training and Experience

People in this group usually require some high school or a high school diploma.

- Some need an apprenticeship or a combination of several years' experience and college or other trade courses, or several years' on-the-job training. They may require provincial trade certification or a licence.
- Commercial divers must complete a recognized commercial diving school program and obtain a commercial divers licence. They may require military or police diving experience.
- Commercial divers who use explosives usually have a provincial blasters licence.

## About these Occupations

7,000 were employed in this occupational group in 1994, little changed from 1984. Over the same period, economy-wide employment increased by 17%. Recent employment trends in this occupational group are unfavourable.

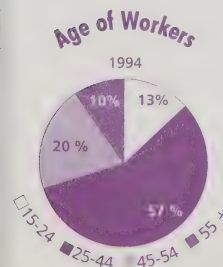
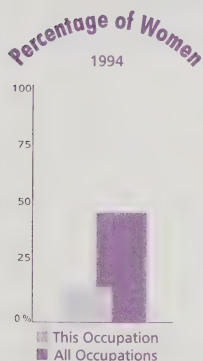
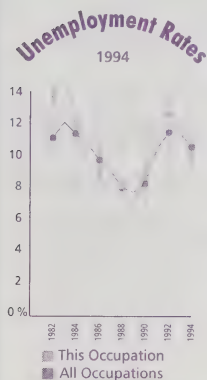
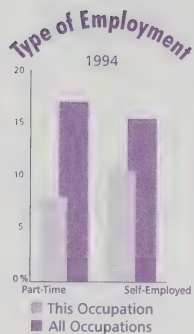
- This group includes a wide variety of trades.
- Part-time employment is about half the average rate.
- Self-employment is below average.
- The proportion of women has increased in the last 10 years but remains about a third of the average.
- The age distribution of workers is similar to the overall work force.
- The unemployment rate is near the national average.
- Full-time earnings are at about average levels.
- Employment varies moderately with economic conditions and is somewhat seasonal.

**Current labour market conditions are fairly good.**

## Looking to the Year 2000

Labour market conditions for this group are expected to improve over the next five years but remain fairly good.

- Job growth is expected to be weak in other service industries, the largest employer.
- Employment opportunities will be scattered over a wide variety of sectors, including manufacturing, wholesale trade and other business services.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 738.  
Vol. 2 Field of Study Cross-index: T312, T314, T316, T318.  
For further information, see List of Associations.



# Motor Vehicle and Transit Drivers

## At Work

These drivers work in government and private transportation and transportation service companies, manufacturing and distribution companies, moving and taxi companies, private households and other organizations.

- Truck drivers transport goods within and between cities and towns, provinces and territories and over international routes. They may transport hazardous products or dangerous goods.
- Bus drivers, streetcar drivers and subway and light rail transit operators take passengers along established routes to local destinations.
- Bus drivers also transport passengers and goods to intercity or long-distance points and drive sightseeing tour buses.
- School bus drivers transport students between school and home and on excursions.
- Taxi drivers and limousine drivers take passengers to and from destinations and collect fares.
- Chauffeurs transport family members or business representatives to and from destinations.
- Delivery drivers use automobiles, vans and light trucks to pick up and deliver products.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These drivers usually complete some high school or have a high school diploma.

- Taxi and limousine drivers and chauffeurs usually have a minimum of one year of safe-driving experience and an appropriate drivers licence for their vehicle. Taxi drivers usually require municipal permits.
- Delivery drivers usually need one year of safe-driving experience and an appropriate drivers licence for their vehicle.

## About these Occupations

387,000 workers were employed in this group as of 1994 — 20% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

- One half work as truck drivers.
- There are about half as many part-time workers as the national average.
- Self-employment is slightly higher than the economy-wide average.
- 13% of workers are women — less than a third of the national average.
- There are relatively few young workers, reflecting the need for sufficient driving experience and training to acquire the requisite skills.
- Unemployment is slightly more than the national average.
- Full-time earnings are somewhat below the national average.
- Employment is sensitive both to business conditions and to seasonal fluctuations.

**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for workers in these occupations will remain fairly good through the year 2000.

- Employment growth is expected to be strongest in public transit as job growth in the largest employing industry, truck transport, remains weak.

## Work Prospects

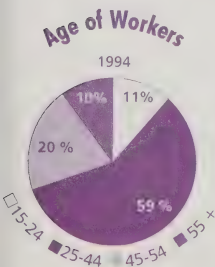
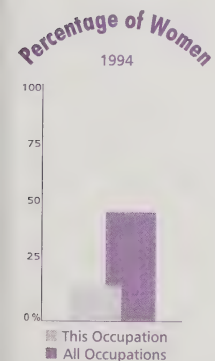
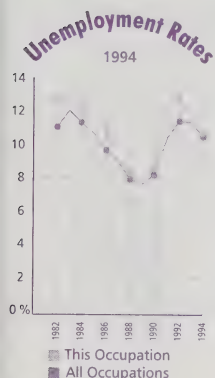
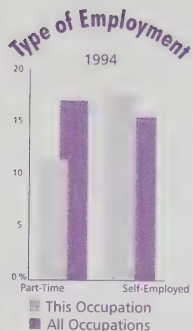
1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



See also: This Occupation Code: 741. Related Codes: 7411, 7412.  
Vol. 2 Field of Study Cross-index: T37, T312, T317.  
For further information, see List of Associations.





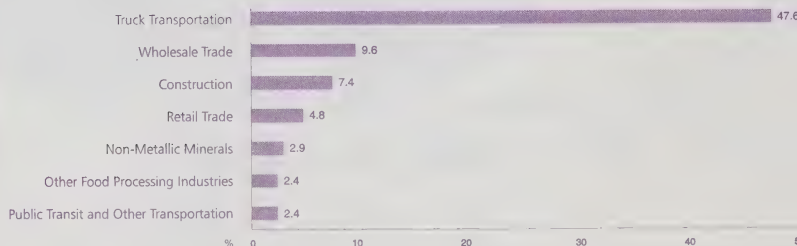
# Truck Drivers

## At Work

Truck drivers work for transportation companies, manufacturing and distribution companies and moving companies. They may also be self-employed. Their duties may require them to:

- Operate and drive straight or articulated trucks weighing over 4,600 kg with three or more axles to transport goods and materials;
- Oversee all aspects of trucking such as condition of equipment, loading and unloading, and safety and security of cargo;
- Obtain special permits and other documents required to transport cargo on international routes;
- Record cargo information, distance travelled, fuel consumption and other information in a log book or an on-board computer;
- Receive and relay information to a central dispatcher;
- Drive as part of a team or convoy; and
- Transport hazardous products or dangerous goods.

## Where They Work



## Education, Training and Experience

Truck drivers must usually complete some high school.

- They receive on-the-job training.
- They must have a drivers licence appropriate to the class of vehicle they are driving.
- Drivers who operate vehicles equipped with air brakes must have air brake endorsements.
- Drivers who deal with hazardous products or dangerous goods must be certified by their employers.
- With experience or additional training, they may progress to supervisory positions or to non-driving occupations such as truck driving instructors, safety officers and truck dispatchers.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

195,000 workers were employed as truck drivers as of 1994 — 17% more than in 1984, exactly matching employment growth economy-wide. Recent employment trends in this occupation are favourable.

- 94% work full-time.
- Women make up only 2% of the work force in this occupation.
- There are few young workers, reflecting the need for sufficient driving experience and training.
- The unemployment rate is above the national average.
- Full-time earnings are slightly below the national average.
- Employment in this occupation is sensitive to business conditions and is highly seasonal.

**Current labour market conditions for truck drivers are fairly good.**

## Looking to the Year 2000

Labour market conditions for workers in this occupation will remain fairly good through the year 2000.

- Employment growth will be centred in the truck transport industry but will be limited. Slow employment growth for truck drivers is also expected in wholesale and retail trade, while demand for truck drivers in construction is expected to decline.

## Work Prospects

1995 to 2000

**Getting Better**

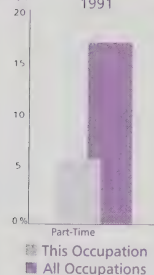
**Stable**

**Getting Worse**

How will labour market conditions change in this group?

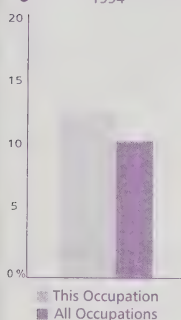
### Type of Employment

1991



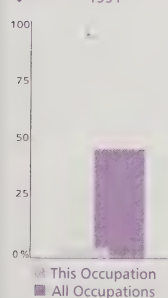
### Unemployment Rates

1994



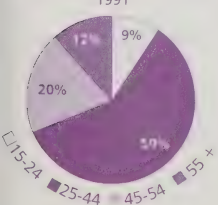
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 7411. Related Code: 741.  
Vol. 2 Field of Study Cross-index: T35, T37, T312.  
For further information, see List of Associations.



# Bus Drivers and Subway and Other Transit Operators

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

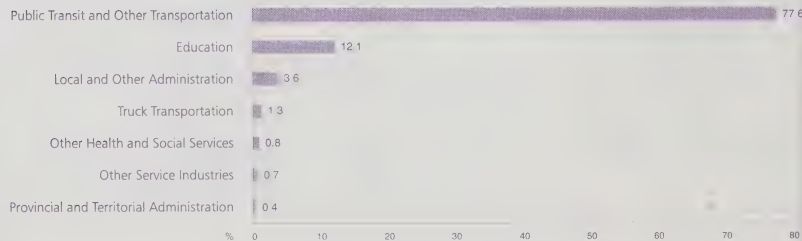
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this occupation work for municipal governments. Bus drivers may also be employed by private transportation companies.

- Bus and streetcar drivers transport passengers to local, intercity or long distance destinations. They may drive sightseeing tour buses and provide information on points of interest.
- School bus drivers transport children between school and home, and on excursions. They ensure safety when children board and leave buses and cross streets when the bus is stopped.
- Subway train and light rail transit operators, often working in two-person crews, may operate controls and close transit vehicle doors. They may also report delays, malfunctions and accidents to the control unit and direct passengers during emergency evacuation procedures.

## Where They Work



## Education, Training and Experience

People in this occupation may have to complete high school and must have a minimum of one year of safe driving experience.

- They usually receive three months of on-the-job training including classroom instruction.
- Bus drivers require a Class B, C, E or F drivers licence in Ontario and a Class 2 drivers licence elsewhere.
- Subway and light rail transit operators usually must have experience as a public transit bus driver.
- With experience, people in this group may progress to supervisory or inspector positions.

## About this Occupation

72,000 workers were employed in this occupation in 1994 — 32% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- There are far more part-time workers than the national average.
- There are fewer women in this occupation than the national average, but more than double the proportion of women in the broader group of motor vehicle and transit drivers.
- There are very few young workers, reflecting the need for sufficient driving experience and training.
- The unemployment rate is lower than the national average.
- Full-time earnings are below the national average.
- Employment in this occupation is moderately sensitive to business conditions and is not seasonal.

**Current labour market conditions in this occupation are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for workers in this occupation will remain good through the year 2000.

- Demand for transit services may intensify as road congestion and pollution increase. Government spending restrictions may slow public transit growth, however.
- Public transportation is expected to see moderate employment growth over the next five years and to remain the dominant source of job opportunities for this occupation. Additional opportunities may exist in education and local transportation, but the number of jobs in this area is comparatively small.

## Work Prospects

1995 to 2000

Getting Better

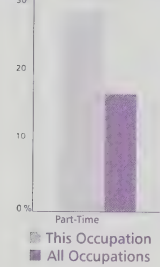
Stable

Getting Worse

How will labour market conditions change in this group?

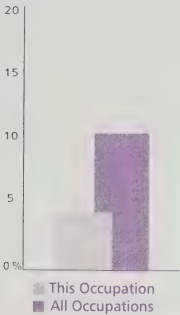
### Type of Employment

1991



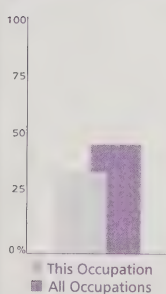
### Unemployment Rates

1994



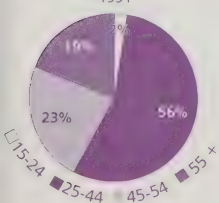
### Percentage of Women

1991



### Age of Workers

1991



See also: This Occupation Code: 7412. Related Code: 741.  
Vol. 2 Field of Study Cross-index: C12, T37, T310.  
For further information, see List of Associations.





# Heavy Equipment Operators

## At Work

People in this group work for construction companies, heavy equipment contractors, pipeline, logging, cargo-handling and other companies, governments and private contractors.

- Heavy equipment operators operate backhoes, bulldozers, loaders, graders, side-booms, dredging and heavy paving equipment, power shovels, pile drivers and other heavy equipment.
- Heavy equipment operators excavate, load, grade and clear land in the construction and maintenance of roads, bridges, airports, oil and gas pipelines, tunnels, buildings and other structures, in surface mining and quarrying activities, and in material handling work.
- Public works maintenance equipment operators operate garbage trucks, street cleaning equipment, snowploughs, sewer maintenance equipment, sanding and oiling trucks and other maintenance equipment.

This occupational group also includes backhoe, bulldozer and grader operators, garbage truck drivers, sand spreader operators, street flusher operators and salt truck operators.

## Full-Time Earnings

1993

\$51,000

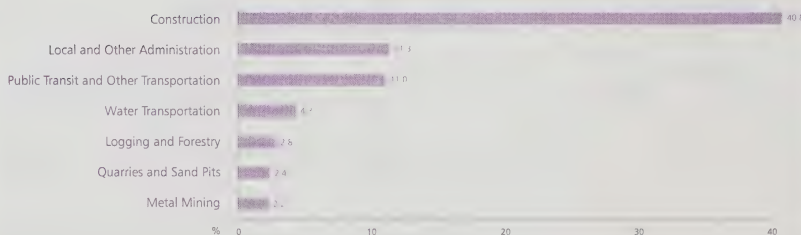
\$34,900

\$18,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group usually have some high school education.

- Heavy equipment operators must complete a one-to-two-year apprenticeship, or some high school, college or industry courses in heavy equipment operating combined with on-the-job training.
- Heavy equipment operators require trade certification in Quebec. It is available, but voluntary, in Newfoundland. These operators may require company certification at their place of employment.
- Public works maintenance operators usually need experience as public works labourers. They usually get on-the-job training and may require a drivers licence appropriate to the equipment they are driving.
- With experience, they may progress to supervisory positions.

## About these Occupations

82,000 workers were employed in 1994 — an increase of 15% since 1984. Over the same period, employment rose by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

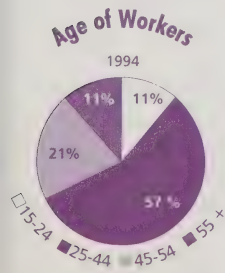
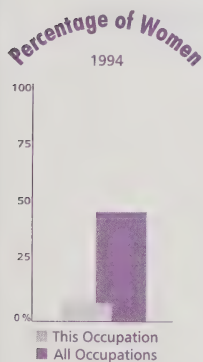
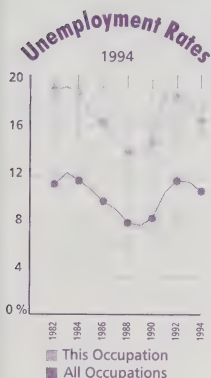
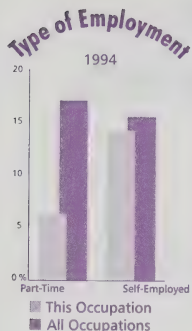
- 80% work as heavy equipment operators and the rest as public works maintenance equipment operators.
- There are about a third as many part-time workers as the national average.
- Self-employment is slightly less prevalent than for the overall work force.
- 6% of workers in this group are women.
- There are relatively few young workers, reflecting the need in these occupations for experience and training.
- Unemployment is much higher than the national average.
- Full-time earnings are about the same as the national average.
- Employment in this group is highly sensitive to business conditions and very sensitive to seasonal fluctuations.

**Current labour market conditions in this occupational group are very poor.**

## Looking to the Year 2000

Labour market conditions in this occupational group will remain very poor through the year 2000.

- With only marginal growth in employment expected in the construction industry, the largest employer for this group, most employment opportunities are expected to be generated by local and provincial government administration.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?

See also: This Occupation Code: 742.  
Vol. 2 Field of Study Cross-index: C35, T35, T37, T312, T316.  
For further information, see List of Associations.

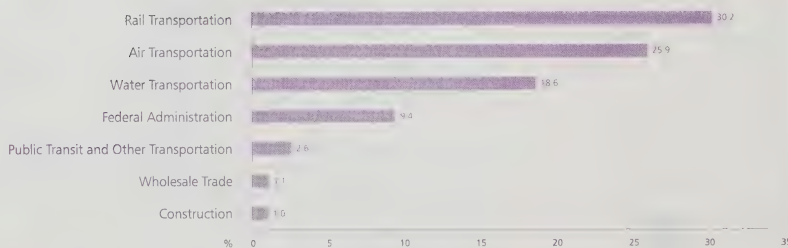
# Other Transport Equipment Operators and Related Workers

## At Work

These people work in railway and marine transport companies, the federal government including the Canadian Forces, cable ferry companies, marine sightseeing companies, water taxi services, canal, port and harbour authorities, logging, airline and air services companies and ferry terminals.

- Railway yard workers regulate traffic, and couple, uncouple and switch train cars.
- Railway track maintenance workers lay, maintain and repair tracks.
- Water transport deck crew stand watch and operate and maintain deck equipment.
- Engine room crew assist in the operation, maintenance and repair of engines and equipment on ships and vessels.
- Lock operators open and close locks along canal systems.
- Cable ferry operators run cable ferries.
- Boat operators run small boats to transport passengers and freight.
- Air transport ramp attendants operate ramp-servicing vehicles, handle cargo and baggage, marshal and tow aircraft, and clean aircraft interiors and exteriors.

## Where They Work



## Education, Training and Experience

People in this group usually require some high school or a high school diploma.

- They usually receive on-the-job training.
- Some require experience in their area of work.
- Railway yard workers need a specific level of the Certificate of the Canadian Rail Operating Rules.
- Boat operators require a Transport Canada certificate.
- Air transport ramp attendants usually have a drivers licence and a good driving record.

## Full-Time Earnings

1993

\$50,300

\$36,800

\$21,100

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

24,000 were employed in this group in 1994, about 13% more than in 1984. Over the same period, economy-wide employment increased by 17%. Recent employment trends in this occupational group are unfavourable.

- A third are air transport ramp attendants, and a third are railway workers.
- 92% work full-time.
- The proportion of self-employed workers in these occupations is about half the average of all occupations.
- The proportion of women working in these occupations is a third of the average for all occupations.
- There are relatively few young workers.
- The unemployment rate is higher than the national average.
- Full-time earnings are slightly higher than average but have fallen relative to other occupations over the past 10 years.
- Employment in these occupations varies moderately with economic conditions and is somewhat seasonal.

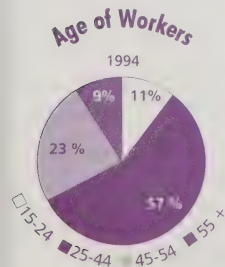
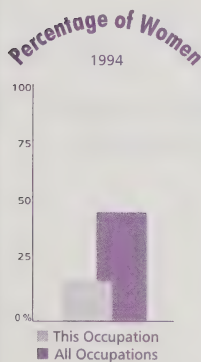
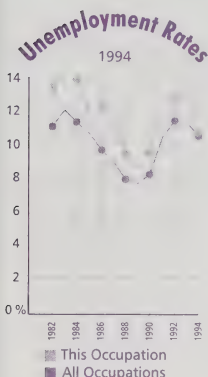
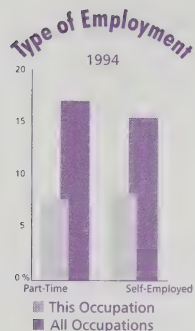
**Current labour market conditions in these occupations are fairly good.**

## Looking to the Year 2000

Labour market conditions in this group are expected to improve somewhat over the next five years but remain fairly good.

- Rail, air and water transport, the three leading employing industries, are all expected to require fewer workers from this group over the next five years. Improvement in labour market conditions will come as workers retire or leave these occupations.
- Occupations related to the rail industry may face worsening conditions as the reduction, or elimination, of rail subsidies to users may decrease railway traffic and demand for workers.

See also: This Occupation Code: 743.  
Vol. 2 Field of Study Cross-index: C314, T316, T317.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





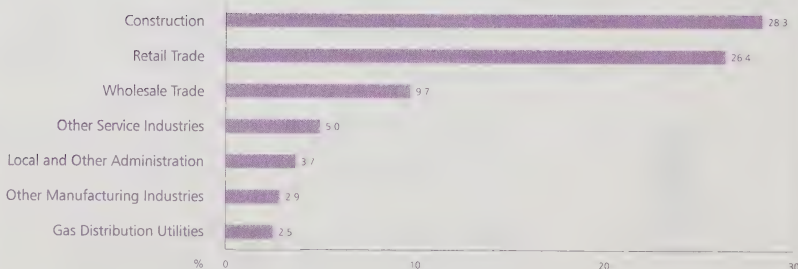
# Other Installers, Repairers and Servicers

## At Work

People in this group work in gas distribution companies, water filtration and distribution and waste treatment plants, automobile and truck service and repair shops, service departments of industrial organizations and construction, mining and logging companies, pest control companies, product specialty repair, and installation and service organizations. They may also be self-employed.

- Residential and commercial installers and servicers install and service products such as water heaters, septic systems and prefabricated windows, doors and fences.
- Waterworks maintenance workers maintain and repair waterworks equipment and facilities.
- Gas maintenance workers perform routine maintenance and minor repairs to exterior and underground gas mains and distribution lines.
- Automotive mechanical installers and servicers install parts such as mufflers, exhaust pipes and shock absorbers, and perform oil changes and other routine maintenance on motor vehicles and heavy equipment.
- Pest controllers and fumigators apply chemical and other treatments to buildings and outside areas to remove and destroy insects and other pests.
- Other repairers and servicers repair and service a wide variety of products such as cameras, musical instruments and coin and vending machines.

## Where They Work



## Education, Training and Experience

People in this group usually need some high school education.

- They usually receive on-the-job training.
- Some require college or other courses or experience in their company.
- Residential and commercial installers and repairers usually need experience and may require a drivers licence.
- Pest controllers and fumigators require a pesticide applicator licence.

## Full-Time Earnings

1993

\$49,500

\$31,100

\$13,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

52,000 were employed in these occupations in 1994 — 10% more than in 1984. Over the same period, economy-wide employment increased by 17%. Recent employment trends in this occupational group are unfavourable.

- 44% are residential and commercial installers and service workers.
- 92% work full-time.
- Self-employment is somewhat higher than the average for all occupations.
- Women make up 12% of workers, less than a third of the average for all occupations.
- The age distribution of workers in this group is similar to the overall work force.
- The unemployment rate in these occupations is above the national rate.
- Full-time earnings are somewhat less than average levels.
- Employment is extremely seasonal and varies with changing economic conditions.

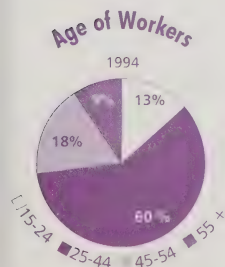
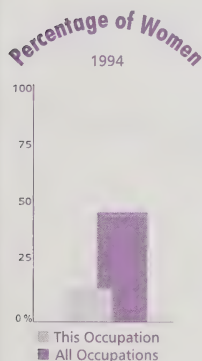
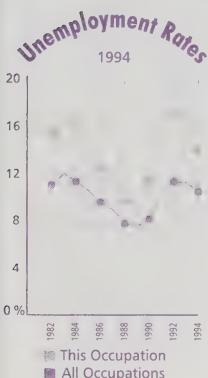
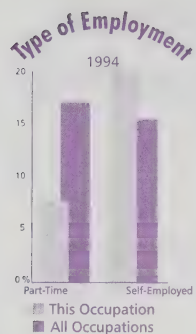
**Current labour market conditions in these occupations are poor.**

## Looking to the Year 2000

Labour market conditions in this group are expected to improve over the next five years but remain poor.

- Construction, wholesale and retail trade industries are expected to lead job growth for this group, although job opportunities can be found in most other industries.

See also: This Occupation Code: 744.  
Vol. 2 Field of Study Cross-index: T35, T37, T310, T312, T316.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Longshore Workers and Material Handlers and Related Occupations

## At Work

People in this group work in marine cargo handling companies, shipping agencies and shipping lines, transportation, storage and moving companies, and a wide variety of manufacturing and processing companies and retail and wholesale warehouses.

- Longshore workers operate industrial trucks, tractors and other mobile equipment to transfer containers and other cargo within range of cranes and hoists on dock areas. They operate winches and other hoisting devices to load and unload cargo on and off ships, and operate mechanical towers to load vessels with materials such as coal and ore. They also operate equipment to transfer bulk items such as grain to vessel holds and liquid materials to vessel storage tanks.
- Material handlers (manual) load, unload and move products by hand or on dollies or other basic material handling equipment.
- Material handlers (equipment operators) operate winches and other loading devices, industrial trucks, tractors and loaders to transport and retrieve materials. They also operate various types of equipment and conveyors to handle liquid, bulk and other materials.

This group also includes dockworkers, stevedores, ship loader operators, tank loaders, bin fillers, coal handlers, furniture movers, lumber pilers, conveyor console operators, fork lift truck operators, railway car and truck loaders, stockpilers and storage workers.

## Full-Time Earnings

1993

\$42,300

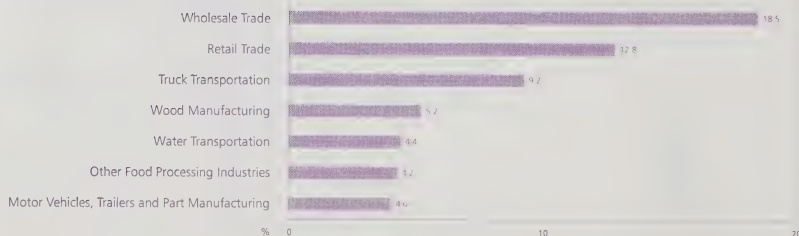
\$27,900

\$13,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$27,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group may require some high school education.

- Longshore workers receive on-the-job training.
- Material handlers (manual) must have the physical strength to work with heavy materials.

## About these Occupations

152,000 were employed in this group in 1994, 9% more than in 1984. Over the same period, economy-wide employment increased by 17%. Recent employment trends in this occupational group are unfavourable.

- 94% are material handlers.
- 18% work part-time, slightly more than the average for all occupations.
- Very few are self-employed.
- Women comprise about one fifth of the work force in this group, less than half the average for all occupations.
- There are far more young workers, about twice the proportion in the overall work force, which reflects the physically demanding nature of work.
- The unemployment rate in this group is higher than the national rate.
- Full-time earnings are below average and are the lowest among comparable semi-skilled occupations.
- Employment is seasonal and is somewhat affected by the business cycle.

**Current labour market conditions in these occupations are poor.**

## Looking to the Year 2000

Over the next five years, labour market conditions for this group are expected to improve slightly but remain poor.

- Demand for workers in these occupations should come from increased demand for material handling and, to a lesser extent, from port services, as trade growth with other nations continues.
- In particular, job growth is expected to be led by the wholesale and retail trade industry, although employment opportunities are dispersed across industries rather than concentrated in any one area. Less employment is expected from wood and truck transport industries, while water transport employment should grow slowly.

## Work Prospects

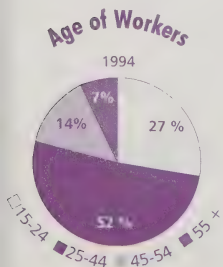
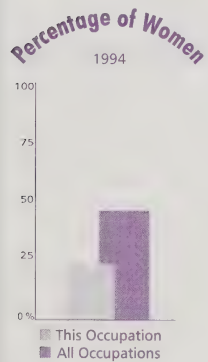
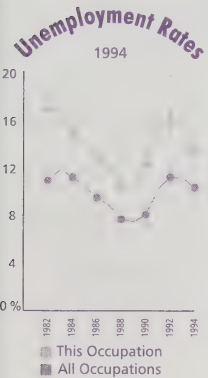
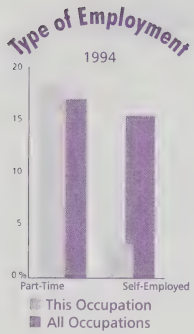
1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



See also: This Occupation Code: 745.  
Vol. 2 Field of Study Cross-index: T37, T312, T316.  
For further information, see List of Associations.





# Trades Helpers and Labourers

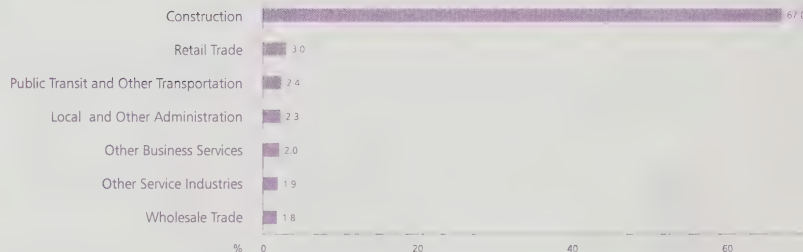
## At Work

People in this group work in construction companies, for trade and labour contractors, and for a wide variety of manufacturing, utility and service companies. They assist skilled tradespersons and perform labouring activities. Their duties may require them to:

- Move, load and unload materials;
- Erect and dismantle structures;
- Mix, pour, spread and rake materials;
- Install, operate, maintain and repair equipment and machinery;
- Oil and grease equipment;
- Assist in drilling and blasting rock;
- Tend and feed machines such as mixers and compressors;
- Direct traffic near construction sites;
- Mix fertilizers, herbicides and pesticides; and
- Assist in land surveying by holding and moving stakes and rods.

This occupational group also includes trades helpers and labourers who work in activities involving the installation, maintenance and repair of industrial machinery, refrigeration, heating and air conditioning equipment, transportation and heavy equipment, and telecommunication and power cables.

## Where They Work



## Education, Training and Experience

People in this group may require some high school education.

- Construction labourers may need general construction labouring experience.
- Some receive on-the-job training.
- Construction labourers in large-diameter oil and gas pipeline construction usually require one season's experience in this type of oil and gas pipeline construction.

## Full-Time Earnings

1993

\$44,300

\$27,300

\$7,400

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

121,000 were employed in this group in 1994, about 14% more than in 1984. Over the same period, economy-wide employment increased by 17%. Recent employment trends in this occupational group are unfavourable.

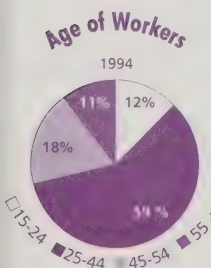
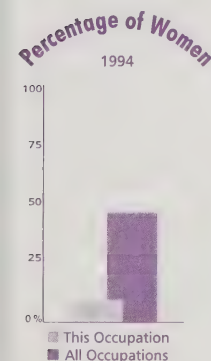
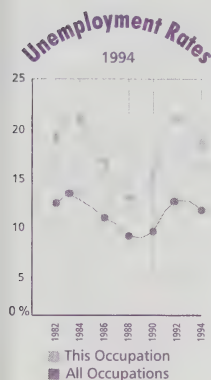
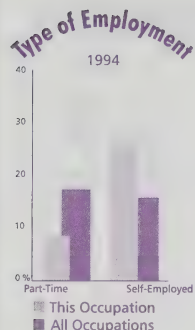
- 90% are construction trade helpers.
- 92% work full-time.
- Self-employment has been rising and now represents 27% of workers in this group, well above average.
- Women make up 8% of those working in this occupational group.
- The age distribution of workers in these occupations is similar to the overall work force.
- The unemployment rate is almost double the national rate.
- Full-time earnings are well below average levels.
- Employment in these occupations is very sensitive to economic conditions and is extremely seasonal.

**Current labour market conditions for this group are very poor.**

## Looking to the Year 2000

Labour market conditions for these occupations are expected to improve over the next five years but remain very poor.

- Although job growth in construction is expected to be slow, it will continue to be the main source of jobs for this group. Increased employment opportunities are expected in a variety of other industries, including retail and wholesale trade, business and other services as well as local and other governments.



**See also:** This Occupation Code: 761.  
Vol. 2 Field of Study Cross-index: T35, T37, T312, T316, T318.  
**For further information, see List of Associations.**

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Public Works and Other Labourers

## At Work

People in this group work in municipal, provincial, territorial and federal government public works departments, for private contractors under contract to governments, and for railway and motor transport companies.

- Public works and maintenance labourers clean debris and snow from sidewalks, streets, roads and other areas, spread sand and salt on sidewalks, shovel materials, dig ditches and trenches, and spread concrete and asphalt on road surfaces using rakes and other hand tools. They operate jackhammers, drills, power mowers and cutters and may operate mobile sidewalk cleaning machines.
- Railway labourers transport tools and equipment on push or hand cars and assist railway track maintenance workers to lay, maintain and repair railway tracks.
- Motor transport labourers assist truck and delivery drivers to load and unload vehicles and perform labouring duties in warehouses.

This occupational group also includes garbage collectors, parking meter collectors, road and sewer maintenance workers, railway car checkers, signal gang helpers, and furniture mover, moving van and truck driver helpers.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this group have different educational requirements depending on their area of work.

- Public works and maintenance labourers receive on-the-job training.
- Railway and motor transport labourers usually require some high school education.
- With experience, they may progress to supervisory positions or to those requiring greater skills.

## About these Occupations

45,000 were employed in this group in 1994, an increase of 11% over 1984. Over the same period, economy-wide employment increased by 17%. Recent employment trends in this occupational group are unfavourable.

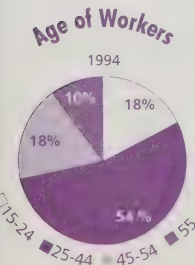
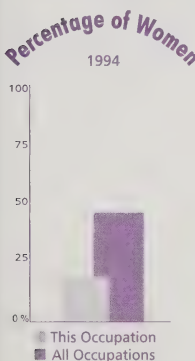
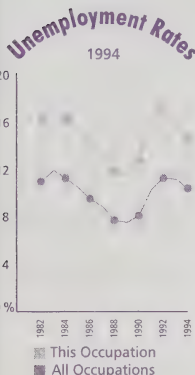
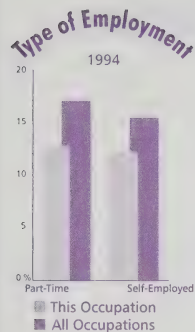
- 90% are public works and maintenance workers.
- 13% work part-time, somewhat below the average for all occupations.
- Self-employment is below the average for all occupations.
- Women make up 18% of workers in this group, less than half the average for all occupations.
- The age distribution of workers in this occupation is similar to the overall work force.
- The unemployment rate is much higher than the national average, but lower than for those in similar occupations.
- Full-time earnings are far below average levels.
- Employment in these occupations is extremely seasonal, but is only moderately affected by business conditions.

**Current labour market conditions in these occupations are poor.**

## Looking to the Year 2000

Labour market conditions in this group are expected to remain poor through the year 2000.

- Almost all jobs will result from the replacement of workers who leave the occupation. Only 6% of job openings will be new jobs.
- Local and other government employment for this group is expected to grow very slowly over the next five years, but will remain the prime source of jobs, as rail and public transit and the federal government, among other industries, reduce labour requirements.



See also: This Occupation Code: 762.  
Vol. 2 Field of Study Cross-index: T35, T37, T312, T316.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting  
Better

Stable

Getting  
Worse

How will  
labour market  
conditions  
change  
in this  
group?





# Managers in Primary Production (Except Agriculture)

## At Work

These managers work in forestry and logging, mining and quarrying, oil and gas and commercial fishing companies, and organizations that provide services to these industries. Their duties may require them to:

- Oversee and analyze operations in their companies by setting production quotas, planning extraction sites and developing policies for the removal of raw materials;
- Recommend changes to senior management to make sure that their company meets production quotas and procedures;
- Evaluate production sites to determine personnel, equipment and other requirements;
- Prepare production reports;
- Make sure that safety rules are carried out;
- Hire personnel and oversee staff training; and
- Direct activities such as construction of access roads and temporary living quarters.

## Full-Time Earnings

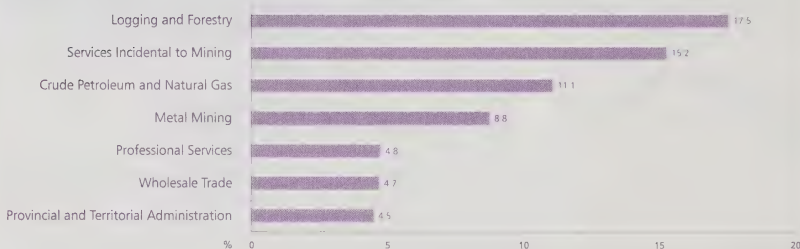
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These managers usually require a bachelor's degree related to their area of work.

- They usually also need several years' supervisory experience which could replace formal education requirements.
- Forestry managers usually need a degree in forestry science or forest engineering.
- Mining and quarrying managers usually need a degree in mining engineering or earth sciences.
- Managers in oil and gas drilling, oil production and services usually need a degree in geology, earth sciences or petroleum engineering.
- With experience, they may progress to senior management positions.

## About this Occupation

9,000 workers were employed in this occupation in 1994 — 21% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are favourable.

- 95% are employed full-time, reflecting working conditions which require managers to be on the job during standard hours.
- The proportion of self-employed workers is slightly below average.
- The share of women in this occupation increased from 20% in 1984 to 30% in 1994 — two thirds the average for all occupations.
- There are few young workers, reflecting the need for workers to acquire experience, education and training for these management positions.
- Unemployment rates are somewhat lower than the overall rate, but are higher than in many other management occupations.
- Full-time earnings are much higher than the average level, as a result of education and experience, and responsibilities given to managers.
- Employment is somewhat affected by economic conditions but is not seasonal.

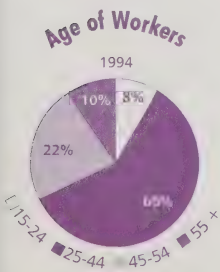
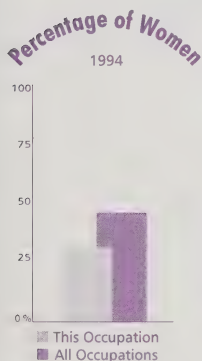
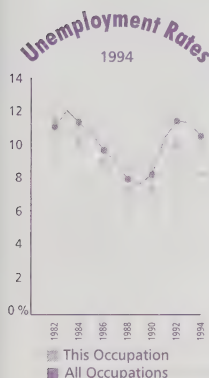
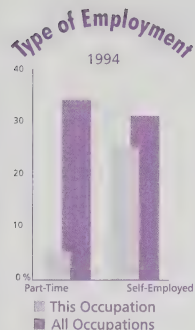
**Current labour market conditions in this occupational group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupational group will remain fairly good through the year 2000.

- Competition will be keen for these managerial positions as experienced workers apply for career advancement during a period of slow employment growth.
- Most employment growth is expected to be in metal mining, in the petroleum and natural gas industry and in services related to the mining industry and professional business services.

See also: This Occupation Code: 081.  
Vol. 2 Field of Study Cross-index: M11, U11, U64, U81, C14.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Supervisors, Logging and Forestry

## At Work

These supervisors are employed by logging companies, contractors and government agencies. Their duties may require them to:

- Supervise and co-ordinate the activities of logging and forestry workers in woodland operations and the activities of silviculture workers engaged in scarification, planting and vegetation control activities;
- Schedule work crews, equipment and transportation for several work locations;
- Resolve problems and recommend measures to improve work methods;
- Instruct workers in safety and recognize unsafe work conditions;
- Ensure that operations meet government regulations;
- Communicate with forestry professional, technical and management personnel regarding forest harvesting and forest management plans;
- Prepare production and other reports; and
- Hire and train new workers.

This occupation also includes hook tenders, logging contractors, woods foremen and forewomen, and supervisors of forest operations and silviculture.

## Full-Time Earnings

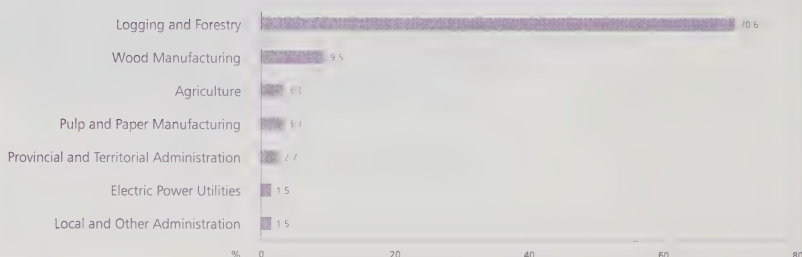
1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

These supervisors usually need a high school diploma.

- They may require a one-to-three-year college program for forestry technologists or technicians.
- They receive formal company training and on-the-job training.
- They usually need several years' experience as loggers, silviculture workers or logging machinery operators.
- They may require a chemical application licence and an industrial first aid certificate.

## About this Occupation

7,000 were employed as supervisors in logging and forestry in 1994, a 6% decline since 1984. Over the same period, economy-wide employment increased by 17%. Recent employment trends in this occupation are unfavourable.

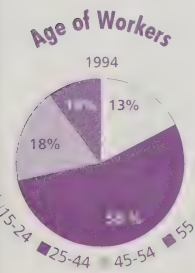
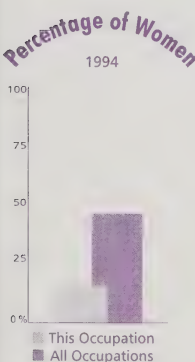
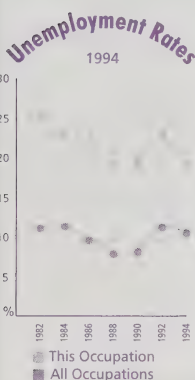
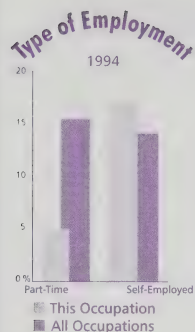
- 95% of jobs are full-time, which reflects the nature of work, often carried out in isolated locations.
- Self-employment has grown and is now slightly higher than the average for all occupations.
- The proportion of women in this occupation is about a third of the average for all occupations but is higher than in other logging and forestry occupations.
- The age distribution of workers in this occupation is similar to the overall work force.
- The unemployment rate is very high in this occupation, nearly double the national rate.
- Full-time earnings are slightly below average levels.
- Employment in this occupation is extremely seasonal and varies moderately with business conditions.

**Current labour market conditions for logging and forestry supervisors are very poor.**

## Looking to the Year 2000

Labour market conditions for this occupation are expected to improve over the next five years but remain very poor.

- Wood industries are expected to provide better employment opportunities for this occupation over the next five years as employment in logging and forestry, the largest employing industry, falters.
- Canada's competitive advantage in forestry, however, should continue to provide a stable base for future expansion in this occupation.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?

See also: This Occupation Code: 821.  
Vol. 2 Field of Study Cross-index: U66, C62, C63.  
For further information, see List of Associations.





# Supervisors, Mining, Oil and Gas

## At Work

These supervisors work for coal, metal and non-metal mineral mining and quarrying companies, and for drilling and well service contractors and petroleum producing companies. Their duties may require them to:

- Supervise the activities of workers in underground and surface mines and quarries, or workers who drill for oil and gas, operate service rigs or provide oil and gas services;
- Establish work schedules and co-ordinate work activities with other departments;
- Oversee safety of operations;
- Resolve work problems and recommend measures to improve productivity;
- Recommend hirings and promotions;
- Train workers in job duties, safety procedures and company policies;
- Requisition materials and supplies; and
- Prepare production and other reports.

This occupational group also includes mine captains, shift, track and yard bosses, rig managers, multiservice operators and tool pushers.

## Where They Work



## Education, Training and Experience

These supervisors must have a high school diploma.

- Mining and quarrying supervisors may need a college or university program in mining technology or engineering. They usually require several years' experience and may require provincial certification.
- Oil and gas drilling and service supervisors require extensive experience, eight years or more, in the occupations they are supervising. They also need first aid, hydrogen-sulphide awareness, blow-out prevention and other safety certificates. They may also require a college diploma in petroleum engineering technology.
- In addition, drilling supervisors and rig managers need college or industry courses for drillers and supervisors.
- Well services supervisors require college or industry courses and several years' experience.

## Full-Time Earnings

1993

\$60,000

\$43,100

\$23,800

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

9,000 workers were employed in this group in 1994 — an 8% drop in employment since 1984. Over the same period, employment rose by 17% economy-wide. Recent employment trends in these occupations are unfavourable.

- Three fifths of these supervisors work in mining and quarrying, and the rest are in oil and gas drilling.
- 97% work full-time.
- Self-employment is below the national average but has increased since 1984.
- Only 12% of workers are women, but this is almost double the proportion in 1984.
- There are relatively few young workers, reflecting the need for sufficient experience and training to acquire the necessary skills.
- The unemployment rate is close to the national average.
- Full-time earnings are well above the national average, much higher than those in most other comparable supervisory occupations.
- Employment is moderately sensitive to business conditions and is somewhat seasonal.

**Current labour market conditions in this occupational group are fairly good.**

## Looking to the Year 2000

Labour market conditions in this group will improve from fairly good to good over the next five years.

- As metal mining is expected to reduce its labour requirements from this group over the next five years, most job opportunities are expected to be in services incidental to mining, the crude oil and natural gas industry and the coal industry.

## Work Prospects

1995 to 2000

**Getting Better**

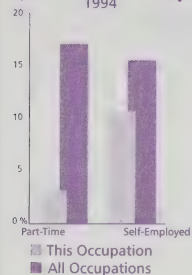
**Stable**

**Getting Worse**

How will labour market conditions change in this group?

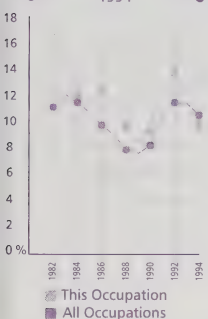
### Type of Employment

1994



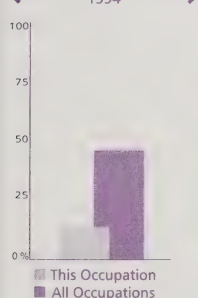
### Unemployment Rates

1994



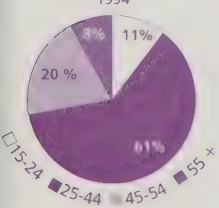
### Percentage of Women

1994



### Age of Workers

1994



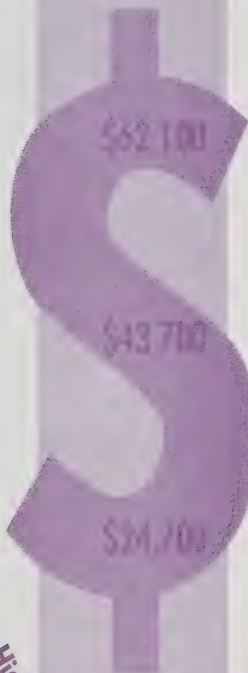
See also: This Occupation Code: 822.  
Vol. 2 Field of Study Cross-index: U36, C64, T316.  
For further information, see List of Associations.



# Underground Miners, Oil and Gas Drillers and Related Workers

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

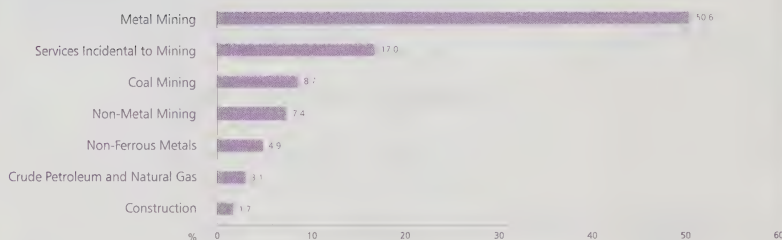
## At Work

People in this group work in coal, metal and non-metallic mineral underground mines, in specialized mine, drilling and well service contractors, and in petroleum producing, well logging and testing companies.

- Underground production and development miners operate drilling and mining machines, load and detonate explosives, and perform other activities in underground mining.
- Oil and gas drillers and well servicers direct drill crews in setting up rigs during drilling activities and completing or servicing wells. They operate drill or service rig machinery controls.
- Oil and gas well loggers, testers and related workers operate specialized mechanical and electronic equipment, tools and instruments to provide services for well drilling, completion and servicing.

This occupational group also includes blasters, jumbo drill operators and mining machine operators, electric line operators, service rig operators and well testing operators.

## Where They Work



## Education, Training and Experience

People in this group usually must have a high school diploma.

- They usually require industry or college courses, supervised on-the-job training and experience in subordinate positions such as mine labourers and members of rig crews.
- Underground production and development miners often need company licensing or certification, and may require blasting licences.
- Those working in the oil and gas occupations need first aid, hydrogen-sulphide awareness, blow-out prevention and other safety certificates.
- Offshore drillers require several years' experience in similar land positions.

## About these Occupations

19,000 workers were employed in this group in 1994 — a 15% drop in employment since 1984. Over the same period, employment rose by 17% economy-wide. Recent employment trends in this occupational group are very unfavourable.

- Over four fifths work as underground production and development miners and the rest in oil and gas drilling.
- 96% work full-time.
- Self-employment is below the national average.
- Only 6% of workers are women, there has been some growth in their employment share in recent years.
- The age distribution of workers in this group is similar to the overall work force.
- The unemployment rate is higher than the national average.
- Full-time earnings are above the national average, much higher than in most other skilled occupations in primary industries.
- Employment in these occupations is moderately sensitive to business conditions but is not seasonal.

**Current labour market conditions in this occupational group are fairly good.**

## Looking to the Year 2000

Labour market conditions for workers in this occupation will improve from fairly good to good over the next five years.

- Most employment opportunities are expected to be in the area of primary metals, petroleum and natural gas, and professional business services. The larger employing industries — metal mining, coal and non-metal mining — are all expected to reduce requirements for workers from this group over the next five years.

## Work Prospects

1995 to 2000

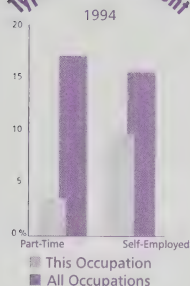
Getting Better

Stable

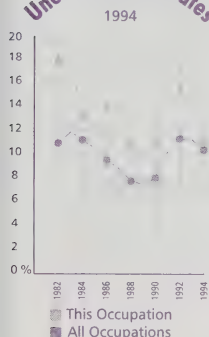
Getting Worse

How will labour market conditions change in this group?

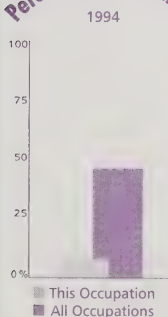
### Type of Employment



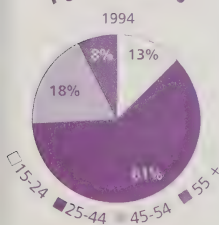
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 823.  
Vol. 2 Field of Study Cross-index: C64, T312, T316, T317.  
For further information, see List of Associations.





# Logging Machinery Operators

## At Work

People in this occupation work for logging companies and contractors and in a variety of other industries such as wood manufacturing, construction, pulp and paper manufacturing and retail trade.

- Cable yarding system operators use machines to transport trees from logging sites to landing sites and log-loading locations in mountainous terrain.
- Mechanical harvester and forwarder operators assess logging sites and drive heavy equipment to perform a combination of felling, slashing, bucking (sawing trees into logs), bunching and forwarding operations at logging sites.
- Mechanical tree processor and loader operators use machines to perform a combination of slashing, bucking, bunching, chipping, sorting and loading operations at landing sites.

## Full-Time Earnings

1993

\$47,300

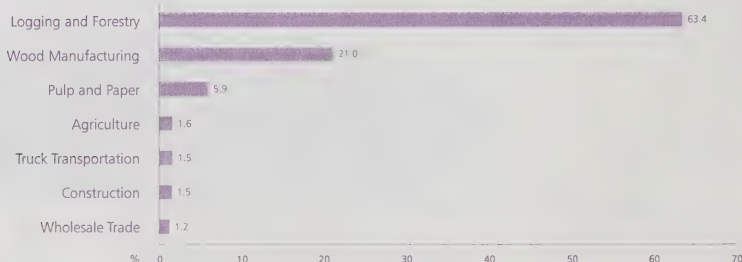
\$33,100

\$15,700

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

People in this occupation may require a high school diploma.

- Employers provide them with on-the-job training which varies from three to 16 months depending on the type of woodland operation and machinery operated.
- Logging machine operators may require heavy equipment operations certification, air brake certification, Workplace Hazardous Materials Information System (WHMIS) certification and company certification for mobile logging machinery operation.
- Mechanical harvester and forwarder operators may require chain saw and skidder operator experience.
- Feller buncher and cable yard operators usually require from three-to-five years' logging experience.
- Mechanical tree processor and loader operators usually require one-to-three years' logging experience.

## About this Occupation

About 10,000 workers were employed as logging machine operators in 1994 — 7% less than in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- There are very few part-time workers, probably due to the inaccessibility of work sites which are often in isolated locations.
- Self-employment has increased in recent years and slightly exceeds the average for all occupations.
- Very few women (9%) work in this occupation.
- The age distribution of workers is similar to the overall work force.
- The unemployment rate is very high, about twice the national rate.
- Full-time earnings are slightly below average levels.
- Employment is moderately affected by business conditions and seasonal factors.

**Current labour market conditions for logging machine operators are very poor.**

## Looking to the Year 2000

Labour market conditions are expected to improve from very poor to poor over the next five years.

- Canada's competitive advantage in forestry should continue to provide a strong underlying demand and levels of employment for this occupation are expected to remain close to historical averages.
- This occupation is expected to experience a slight decline in its chief employing industry, logging and forestry and little employment growth in the wood products or pulp and paper industries.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

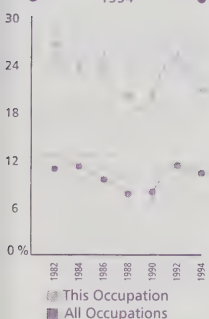
### Type of Employment

1994



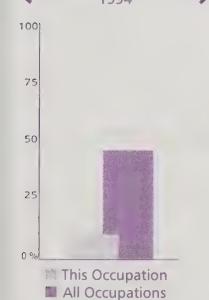
### Unemployment Rates

1994



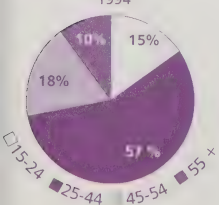
### Percentage of Women

1994



### Age of Workers

1994



See also: This Occupation Code: 824.  
Vol. 2 Field of Study Cross-index: U66, C63, T312.  
For further information, see List of Associations.



# Contractors, Operators and Supervisors in Agriculture, Horticulture and Aquaculture

## Full-Time Earnings

1993

\$48,100

\$23,600

\$3,700

## Highest, Average and Lowest\*

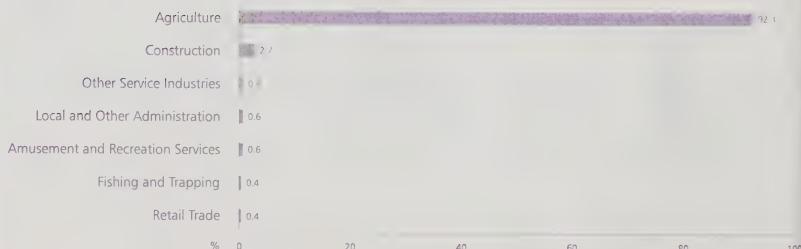
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work for farmers, agricultural services, nurseries and greenhouses, landscaping companies, cemeteries, lawn care and tree service companies, landscaping departments of governments and other organizations, private fish hatcheries and commercial aquatic farms. They may also be self-employed.

- Farmers and farm managers manage the operations of farms, ranches and orchards. They grow crops, raise and breed farm animals and market farm products.
- Agricultural and related service contractors and managers direct and co-ordinate services such as artificial insemination, livestock shearing, ploughing, cultivating and harvesting.
- Specialized livestock workers carry out feeding, health and breeding programs for livestock. They may also supervise farm workers and labourers.
- Nursery and greenhouse operators and managers direct and co-ordinate the activities of their staff who grow and market trees, shrubs, flowers and plants.
- Landscaping and grounds maintenance contractors and managers direct and co-ordinate the operations of landscaping, lawn care, tree and other services.
- Landscape and horticulture supervisors direct and co-ordinate the activities of associated workers.
- Aquaculture operators and managers direct and co-ordinate the operations of facilities that cultivate and harvest fish, shellfish and marine plants.

## Where They Work



## Education, Training and Experience

People in this group may require some high school or a high school diploma.

- They usually need a college diploma and/or training and experience in agriculture, livestock husbandry, aquaculture, landscaping and horticulture.

## About these Occupations

322,000 workers were employed in this group in 1994 — only 1% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- 87% of workers in this group are farmers or farm managers.
- There is somewhat less part-time employment than the average for all occupational groups.
- 70% of this occupational group are self-employed, about four times the average for all occupations.
- Women make up about a quarter of total employment, less than the average for all occupations.
- There are few young workers, reflecting sluggish employment growth.
- Unemployment is very low due to the high percentage of self-employed workers.
- Full-time earnings are less than average levels and have declined over the last decade, making them among the lowest for skilled primary sector occupations.
- Employment is moderately affected by business conditions and is highly seasonal.

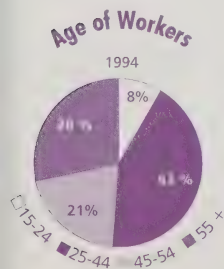
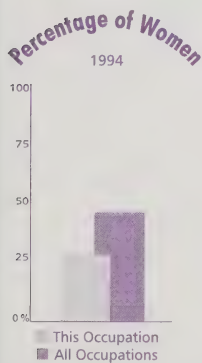
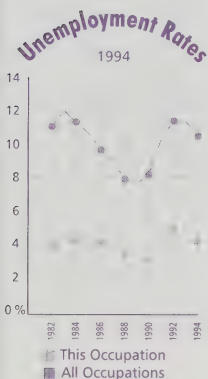
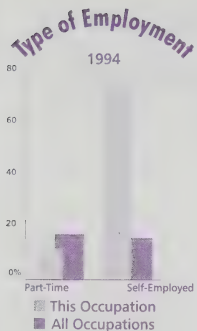
**Current labour market conditions are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions are expected to remain good through the year 2000.

- Above average performance could come from those catering to an ageing domestic population, such as landscapers, horticultural, nursery and greenhouse operators and managers.
- New entrants considering self-employment in farming may find the financial requirements a barrier to establishing a farming operation.
- Aquaculture also shows promise as a growth area, given dwindling fish stocks and strong demand for fish products.
- Most in this group are employed in agriculture, an area which is expected to reduce employment requirements over the next five years. However, job growth is expected in construction related to landscaping and in other service and recreation industries.

**See also:** This Occupation Code: 825.  
Vol. 2 Field of Study Cross-index: U11, C61, T61.  
**For further information, see List of Associations.**



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





# Fishing Vessel Masters and Skippers and Fishermen/women

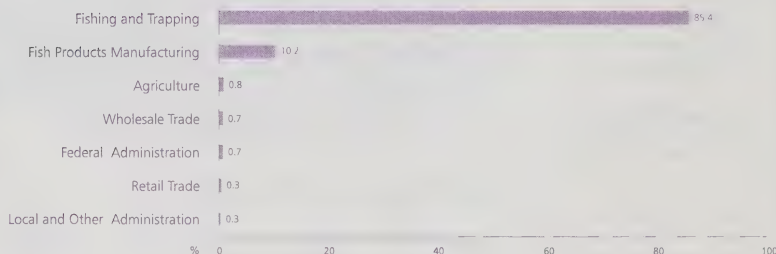
## At Work

People in this group work in commercial fishing vessel organizations. They may also be self-employed operators of fishing vessels.

- Fishing masters and officers command vessels greater than 100 gross tonnes to catch fish and other marine life. They determine fishing areas, pilot courses and compute navigational positions, steer vessels and operate navigational instruments to locate catch. They also direct operations and supervise activities of their crew.
- Fishing vessel skippers and fishermen/women operate vessels to catch fish and other marine life. They operate gear, direct operations and supervise crew members. They also estimate operation costs, plan budgets and establish marketing plans. They may transport fish to processing plants and fish buyers.

This occupational group also includes longliners and seiners.

## Where They Work



## Education, Training and Experience

People in this group require commercial fishing licences.

- Fishing masters and officers usually require some high school education. They must have one-to-two years' experience as fishing vessel deckhands and a fishing master's certificate.
- Captains also require one year's service as officer in charge of the watch.
- Fishing vessel skippers and fishermen/women usually require several years' experience as fishing vessel crew members or helpers. They must have a licence for each fish species they catch.

## Full-Time Earnings

1993

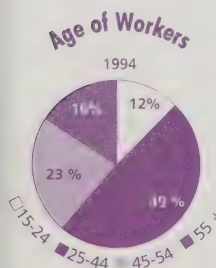
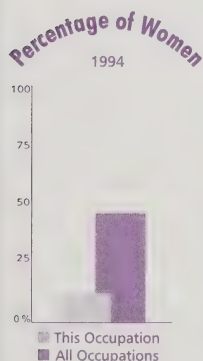
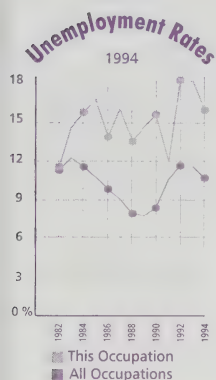
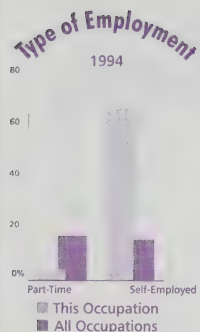
\$16,200

\$24,500

\$5,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.



## About these Occupations

26,000 workers were employed in this group in 1994 — a 12% increase since 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- Almost all (90%) in this occupational group are fishing vessel skippers.
- There is virtually no part-time employment in this occupation.
- Over 65% are self-employed workers, more than four times the average for all occupations.
- 90% are men, but women have almost doubled their share of employment in these occupations since 1984.
- There are somewhat fewer young workers and somewhat more workers over 55 years old than the work force average.
- Unemployment rates are high.
- Full-time earnings are low, substantially below the national average, and among the lowest for skilled primary industry occupations.
- Employment is highly seasonal and subject to the vagaries of the cyclical nature of fish stocks.

**Current labour market conditions for this group are very poor.**

## Looking to the Year 2000

Labour market conditions for this group are expected to worsen over the next five years and remain very poor.

- This occupation may continue to face restructuring and rationalization challenges. Sustained improvement will depend on the success of measures to rebuild stocks and on international co-operation to protect existing resources and rebuild stocks.
- Employment is concentrated in the primary fishing industry which is expected to see a gradual decline for workers in this group over the next five years. Some job growth is expected in fish products and federal administration, although the number of new jobs is small compared to the overall decline.

See also: This Occupation Code: 826.  
Vol. 2 Field of Study Cross-index: C64, T316, T317.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?



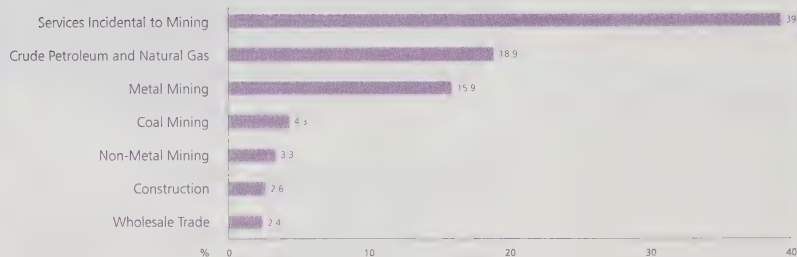
# Mine Service Workers and Operators in Oil and Gas Drilling

## At Work

People in this group work for coal, metal and non-metallic mineral mines, drilling and well service contractors and petroleum producing companies.

- Underground mine service and support workers perform a wide range of mining activities related to the operations of orepasses, chutes and conveyor systems, the construction and support of underground structures, passages and roadways, and the provision of materials and supplies. They operate bulldozers, graders, diesel and electric track haulage equipment.
- Oil and gas drilling workers operate drilling machinery and service rig machinery equipment such as drilling mud systems and pumps, diesel motors, transmissions and other mechanical equipment, and perform other activities as intermediate members of drilling rig crews.
- Oil and gas well services operators drive trucks and operate specialized hydraulic pumping systems to place cement in wells and to treat wells with chemicals, sand mixtures and gases to stimulate production.

## Where They Work



## Education, Training and Experience

People in this group require different backgrounds depending on their area of work.

- Underground mine service and support workers usually have a high school diploma, complete formal and on-the-job training as helpers or in support occupations, and have experience as mine labourers. They often require company licensing or certification. They may also obtain basic common core program certification.
- Oil and gas drilling workers and services operators may require a high school diploma and first aid, hydrogen-sulphide awareness, blowout prevention or other safety certificates. They usually require industry experience as an assistant or labourer.
- Oil and gas well services operators require training with experienced operators.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

8,000 workers were employed in this group in 1994 — a decrease of 9% from 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- 70% of workers in this group are oil and gas workers.
- 96% work full-time.
- Self-employment is well below the national average.
- 7% of workers are women.
- There are somewhat fewer younger workers than the work force average.
- Unemployment is somewhat above the national average.
- Full-time earnings are above average and are the highest for any semiskilled occupation in primary industry.
- Employment is moderately sensitive to economic conditions but is not seasonal.

**Current labour market conditions for this occupational group are fairly good.**

## Looking to the Year 2000

Labour market conditions for this group are expected to improve from fairly good to good over the next five years.

- However, the price of oil and gas and other mining commodities has proven to be volatile in the past. World events could alter commodity prices suddenly which, in turn, could lead to increased or decreased demand by employers in any one year.
- Moderate job growth in crude petroleum and natural gas extraction will provide most of the new jobs for this group, although services incidental to mining operations should also make a strong contribution. In contrast, metal, coal and non-metal mining operations are expected to require fewer workers from this group.

## Work Prospects

1995 to 2000

**Getting Better**

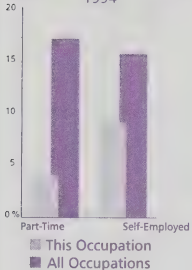
**Stable**

**Getting Worse**

How will labour market conditions change in this group?

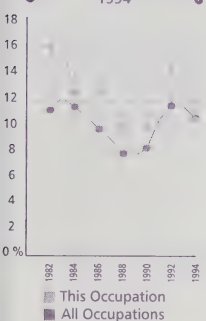
### Type of Employment

1994



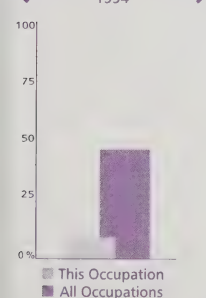
### Unemployment Rates

1994



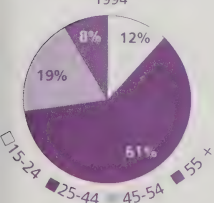
### Percentage of Women

1994



### Age of Workers

1994



See also: This Occupation Code: 841.  
Vol. 2 Field of Study Cross-index: C64, C312, T312, T316.  
For further information, see List of Associations.





# Logging and Forestry Workers

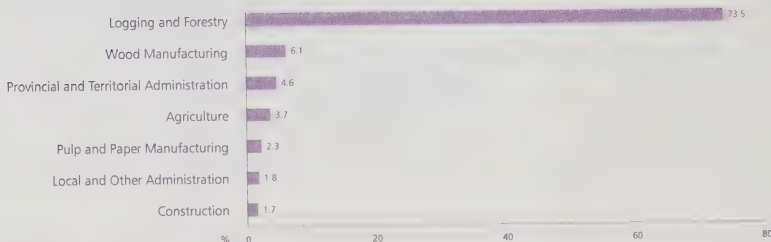
## At Work

People in this group work for logging companies and contractors in wood manufacturing, in government services and in a variety of other industries.

- Chain saw operators fell, delimb and buck trees (cut trees into logs).
- Skidder operators use cable and grapple skidders to move and yard felled trees from logging sites to landing areas for processing and transportation.
- Silviculture and forestry workers plant tree seedlings, thin and space trees in reforestation areas, control weeds and undergrowth, fight forest fires under direction, and operate chain saws, skidders, bulldozers and other equipment to carry out duties for the improvement and conservation of forest lands. They also perform other activities such as collecting seed cones, pruning trees and marking trees for later operations.

This occupational group also includes buckers, fallers, fellers, landingmen/women, forest-fire fighters and operators of spacing, thinning and clearing saws.

## Where They Work



## Education, Training and Experience

People in this group may require a high school diploma.

- They may need a college or other specialized forestry worker or silviculture program and Workplace Hazardous Information System (WHIMS) certification.
- They may need experience as logging and forestry labourers or logging machine operators.
- Chainsaw and skidder operators may require accreditation as forest workers. Employers usually provide them with formal training in chainsaw operation and maintenance and several months' on-the-job training.
- Silviculture and forestry workers require a chemicals application licence and may need a silviculture worker's licence. Employers usually provide them with formal training in power saw operation and maintenance and several months' on-the-job training.

## Full-Time Earnings

1993

\$58,600

\$33,000

\$10,400

Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

23,000 workers were employed in this group in 1994 — 10% fewer than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- 70% of workers in this group are chain saw and skidder operators.
- 95% of workers in this occupation are employed full-time.
- Self-employment is somewhat higher than the average for all occupations.
- Women make up 10% of the workers in this group, although there has been a slight increase in their share over the last 10 years.
- The age distribution of workers in this occupation is similar to the overall work force.
- Unemployment is very high at about twice the national average rate.
- Full-time earnings are somewhat below average levels.
- Employment is extremely seasonal and is moderately affected by business conditions.

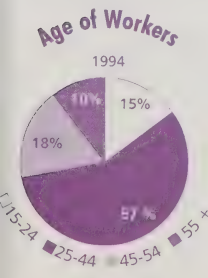
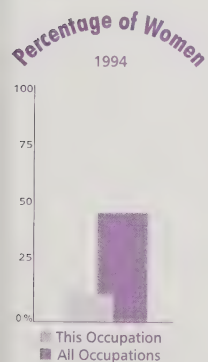
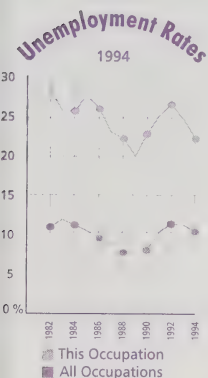
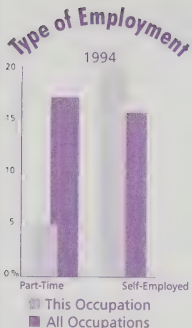
**Current labour market conditions for this group are very poor.**

## Looking to the Year 2000

Labour market conditions in this group are expected to remain very poor through the year 2000.

- Employment in logging and forestry is expected to decline, over the next five years. Limited job growth is expected in the wood product industry and in provincial and territorial administration.
- As a result, new workers may find that they have to compete with more experienced personnel for the positions available.
- Those specializing in silviculture, specifically in forestry renewal, may face better labour market conditions, given the need to address environmental issues and the ongoing need of the forestry industry to replace depleted resources.

See also: This Occupation Code: 842.  
Vol. 2 Field of Study Cross-index: U66, C62, C63, T312.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?



# Agriculture and Horticulture Workers

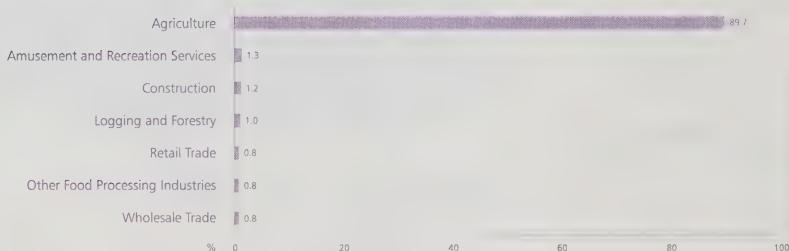
## At Work

People in this group work in crop, livestock, fruit, vegetable and specialty farms, and indoor and outdoor nurseries and greenhouses.

- General farm workers plant, fertilize, cultivate, spray, irrigate and harvest crops, feed and attend livestock and poultry, operate and maintain farm machinery and equipment, and prepare produce for market. They may specialize in a particular type of crop or livestock.
- Nursery and greenhouse workers plant, cultivate and harvest trees, shrubs, flowers and plants and provide information on gardening to customers. They may operate tractors and other equipment to fertilize and spray fields and plants.

This occupational group also includes cowhands, fruit tree pruners and hydroponics workers.

## Where They Work



## Education, Training and Experience

People in this group require different backgrounds depending on their area of work.

- General farm workers may require basic farm knowledge usually obtained from experience. They may complete a college program or other specialized farming course in areas such as farm equipment mechanic, agricultural welding, tree pruning and pesticide application.
- Nursery and greenhouse workers may require a high school diploma, college courses in horticulture or a related field, and a provincial licence to apply chemicals such as fertilizers and pesticides. Employers provide them with on-the-job training.

## Full-Time Earnings

1993

\$45,300

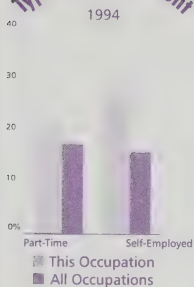
\$24,200

\$4,200

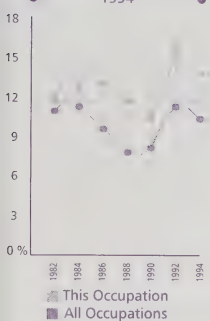
## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

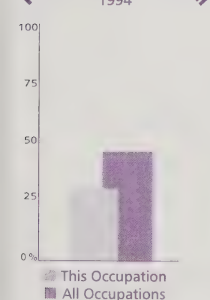
## Type of Employment



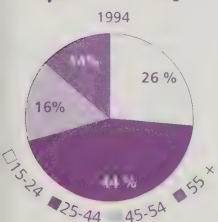
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

138,000 persons were employed in this group in 1994 — 12% fewer than in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- 85% of workers in this group are farm workers.
- The percentage of part-time work is slightly higher than the average of all occupations.
- The proportion of workers who are self-employed is almost double the average of all occupations.
- The proportion of women in these occupations is about two thirds the average for all occupations.
- More young workers, compared to other occupations, reflect the physical nature of work and the entry-level, low-skill nature of these occupations.
- Unemployment is higher than the national rate.
- Full-time earnings are well below average levels.
- Employment in this group is only moderately sensitive to business conditions but is extremely seasonal.

**Current labour market conditions for this group are poor.**

## Looking to the Year 2000

Labour market conditions for new workers are expected to worsen from poor to very poor over the next five years.

- Agriculture is expected to continue to restructure as industry regulations, subsidies and export markets change. Consequently, employment conditions for farm workers are expected to be subject to some volatility in the years ahead.
- Conditions for workers in nurseries and greenhouses may be relatively better than for the group as whole, as an ageing population results in strong growth of leisure activities such as gardening.
- Agriculture is expected to employ fewer workers from this group over the next five years. However, job growth is expected in areas of work related to the recreational services industry.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 843.  
Vol. 2 Field of Study Cross-index: C61, T61, T316.  
For further information, see List of Associations.





# Other Fishing and Trapping Occupations

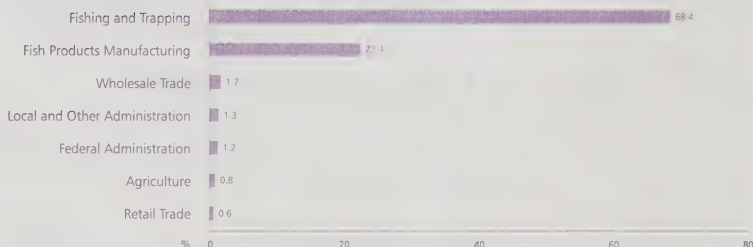
## At Work

People in this group work for organizations that operate commercial fishing vessels, or are self-employed fishermen/women, trappers and hunters.

- Fishing vessel deckhands prepare nets, lines and other fishing tackle, and operate fishing gear to catch fish and other marine life. They clean, sort and pack fish, stow catch in holds, repair nets, splice ropes and maintain fishing gear. They may also steer vessels to and from fishing areas and cook meals for crew members.
- Trappers set and position traps along trails, operate snowmobiles or travel on foot, snowshoes or skis to patrol traplines, kill and skin catch for pelts, and treat and market pelts. They also trap live animals for sale and relocation purposes, and trap designated animals for bounty and other animal control programs.
- Hunters operate boats and snowmobiles or travel on foot to reach hunting areas, kill wild animals with firearms and other weapons, skin animals for pelts, and treat, pack and transport pelts to processing plants and public auctions.

This occupational group also includes icers, crewmen/women and sealers.

## Where They Work



## Education, Training and Experience

People in this group require different backgrounds depending on their area of work.

- Fishing vessel deckhands must have a commercial fishing licence. Employers provide them with on-the-job training.
- Trawlermen/women require a minimum of one year's experience.
- Trappers and hunters may require trapping or hunting courses in their province of work and a trapping or hunting licence.

## Full-Time Earnings

1993

\$42,100

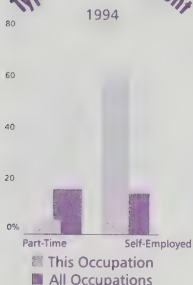
\$24,900

\$3,100

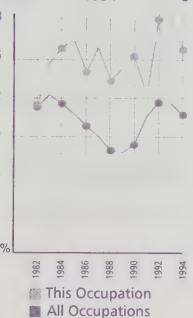
## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

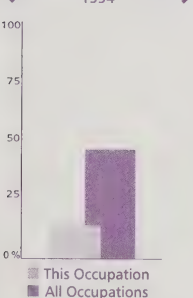
## Type of Employment



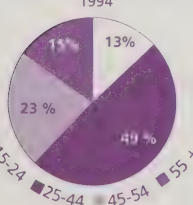
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

9,000 workers were employed in this group in 1994 — 11% more than in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- Fishing vessel deckhands make up almost 90% of workers in this group.
- 95% in this group work full-time.
- 60% of workers are self-employed, about four times the average for all occupations.
- Women make up about 12% of the work force of these occupations, significantly less than the average for all occupations.
- The age distribution of workers in these occupations is similar to the overall work force.
- Unemployment rates are much higher than the national average.
- Full-time earnings in this group are considerably below average levels.
- Employment in this group is only moderately affected by business conditions but is highly seasonal.

**Current labour market conditions for this group are very poor.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to worsen over the next five years and remain very poor.

- Additional improvement in labour market conditions will depend on the successful rebuilding of fish stocks and on co-operation from foreign nations to conserve resources.
- Fishing vessel deckhands and other occupations related to fishing will likely continue to face the challenges of restructuring and rationalization.
- The outlook is no better for those in trapping, as declining consumer demand for fur products will limit employment opportunities.
- Job growth in fishing and fish products is expected to be marginal, resulting in little overall employment growth for this occupation.

**See also:** This Occupation Code: 844.  
Vol. 2 Field of Study Cross-index: T316, T317.  
**For further information, see List of Associations.**

## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Setting Worse**

**How will labour market conditions change in this group?**



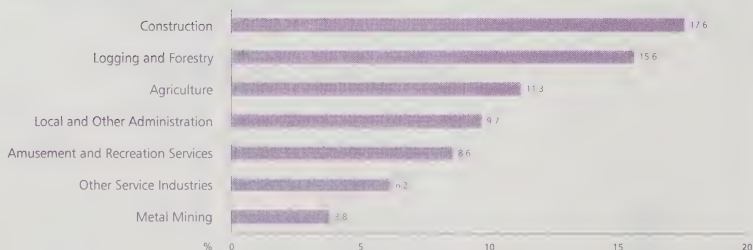
# Primary Production Labourers

## At Work

These labourers work for farmers, orchard owners, landscaping and lawn care companies, landscaping departments, fish hatcheries, aquatic farms, oil and gas drilling and well servicing contractors, mineral miners and petroleum producing companies, logging companies and contractors, golf courses and cemeteries. They assist other workers.

- Harvesting labourers harvest, sort and pack crops.
- Landscaping and grounds maintenance labourers help construct and maintain landscapes by spreading soil, laying sod and planting, cutting, pruning, spraying and dusting flowers, grass, shrubs and trees.
- Aquaculture labourers help maintain fish stock and operate, clean and maintain equipment in fish hatcheries and aquatic farms.
- Marine plant gatherers collect and load seaweed, dulse and Irish moss.
- Shellfish harvesters dig, sort, clean and transport shellfish.
- Mine labourers help maintain, construct and clean underground mines, and load, move, sort and pile materials and supplies.
- Oil and gas drilling, servicing and related labourers handle sections of pipe and drill stems during drilling operations, and clean and maintain equipment.
- Logging and forestry labourers attach chokers and cables to felled trees, plant trees, spray herbicides, clear trails and clean landing areas.

## Where They Work



## Education, Training and Experience

These labourers may need a high school diploma and specialized training.

- Landscaping and grounds maintenance labourers may require a licence to apply chemical fertilizers and pesticides.
- Shellfish harvesters require a commercial fishing licence.
- Oil and gas drilling and servicing, logging and forestry labourers may require a Workplace Hazardous Materials Information System (WHMIS), safety or other certificate appropriate to their area of work.

## Full-Time Earnings

1993

\$43,500

\$25,600

\$8,800

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

89,000 primary production labourers were employed in 1994 — 15% fewer than in 1984. Over the same period, employment rose by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

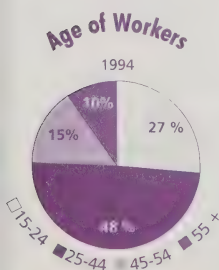
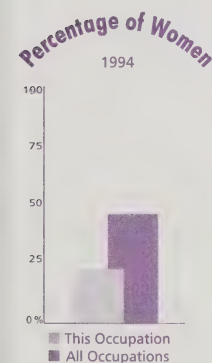
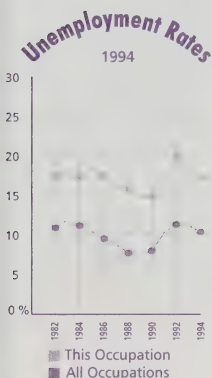
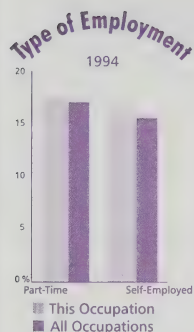
- Landscaping labourers make up 59% of this group.
- The proportion employed part-time is at the average for all occupations.
- Self-employment is at about the average level for all occupations.
- Fewer women work in this group than in others, about half the average share for the overall work force.
- There are many young workers, reflecting the physically demanding, low-skill nature of the work.
- The unemployment rate is very high, nearly twice the national rate.
- Full-time earnings are three quarters of average levels.
- Employment in this occupational group is moderately affected by business conditions and is extremely seasonal.

**Current labour market conditions in this occupational group are very poor.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to remain very poor through the year 2000.

- The replacement of labour by machinery is expected to continue, resulting in reduced demand for labour services for this group. New workers will face stiff competition from experienced unemployed workers.
- Construction, logging and recreation services related to landscaping are expected to be the leading employing industries for this group over the next five years.



**See also:** This Occupation Code: 861.  
Vol. 2 Field of Study Cross-index: C61, C63, T316.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

**How will labour market conditions change in this group?**





# Managers in Manufacturing and Utilities

## At Work

These managers work in manufacturing companies, public and private utilities and heating oil distribution companies.

- Manufacturing managers plan and direct the operations of manufacturing companies or production departments within organizations, usually under the direction of a general manager or other senior manager. They develop production schedules and implement changes to production equipment and systems.
- Utilities managers plan and direct the operations of utility companies or organizations providing services such as the distribution of water, electricity, natural gas and heating oil to residential, commercial and industrial consumers, and waste disposal and recycling.

## Where They Work



## Education, Training and Experience

These managers usually require a college or university degree in their area of work.

- Manufacturing managers usually require a college diploma or university degree in engineering or business administration. They must also have five-to-10 years' supervisory experience in manufacturing.
- Utilities managers must have a college diploma or university degree in an appropriate discipline. For example, managers of transmission lines need a college or university electrical engineering program, and water supply managers require a college or university program in water resource technology.
- Utilities managers also need several years' supervisory experience in a related utilities operations department.
- Utilities managers involved in the transmission and distribution of electrical power, natural gas and heating oil usually require certification as a professional engineer (P.Eng./ing. in Quebec).

## Full-Time Earnings

1993

\$66,100

\$42,500

\$17,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

72,000 workers were employed in this group in 1994 — 32% more than in 1984. During the same period, employment grew by 17% economy-wide. Recent employment trends in these occupations are favourable.

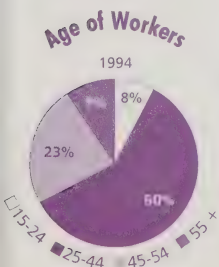
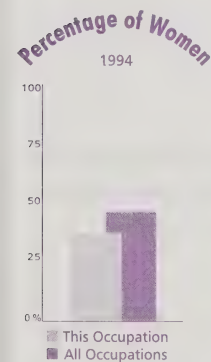
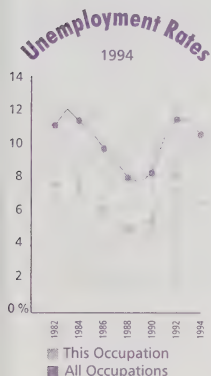
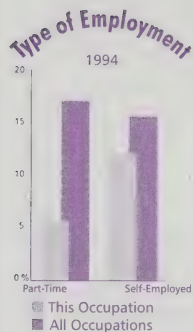
- 87% are manufacturing managers.
- 94% of workers are employed full-time, reflecting working conditions which require managers to be on the job during standard hours.
- The proportion of self-employed workers is slightly below average.
- The share of women in the occupational group increased from 27% in 1984 to 36% in 1994 — somewhat below the average for all occupations.
- There are few younger workers in this occupation, reflecting the work experience, education and training required for managerial positions.
- The unemployment rate is well below average.
- Full-time earnings are much higher than average levels, as a result of education and experience, and responsibilities given to managers.
- Employment in these occupations is very strongly linked to economic conditions but is not seasonal.

**Current labour market conditions in this occupational group are good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this group will remain good through the year 2000.

- As in other managerial occupations, competition will be keen because an increasing supply of qualified candidates will be looking for career advancement.
- Growth in employment for this group should be strong across a variety of industries, most notably motor vehicles and parts, metal fabrication, electric and electronic products, and wholesale trade.



See also: This Occupation Code: 091.  
Vol. 2 Field of Study Cross-index: M11, U11, U81, U86, C14.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Supervisors, Processing Occupations

## Full-Time Earnings

1993

\$53,900

\$36,700

\$18,700

## Highest, Average and Lowest\*

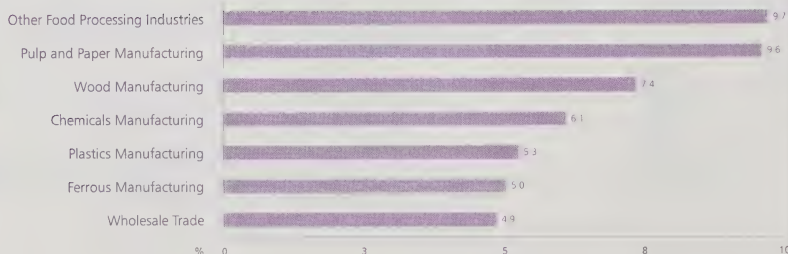
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

These supervisors work for mineral ore and metal processing plants, petroleum and natural gas processing, pipeline, petrochemical, chemical and pharmaceutical companies, water and waste treatment utilities, fruit and vegetable processing plants, dairies, flour mills, bakeries, sugar refineries, fish and meat plants, breweries, food and beverage and tobacco processing organizations, rubber and plastic products manufacturing companies, pulp and paper companies, paper converting companies, sawmills, planing mills, wood treatment and waferboard plants, and textile companies. Their duties may require them to:

- Direct, co-ordinate and schedule the activities of workers;
- Establish methods to meet work schedules and co-ordinate work with other departments;
- Ensure that systems and equipment operate efficiently;
- Identify, investigate, correct and document potential environmental and safety problems;
- Resolve work problems and recommend measures to improve productivity and product quality;
- Requisition materials and supplies;
- Train staff in job duties, safety procedures and company policies;
- Prepare production and other reports; and
- Manage operating budgets.

## Where They Work



## Education, Training and Experience

These supervisors usually require a high school diploma.

- They usually require several years' experience in their area of work.
- Some may require special certificates and licences.

## About these Occupations

47,000 workers were employed in this group in 1994. Employment grew by 3% over the 1984-94 period, while employment rose by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- This group is composed of supervisors in a wide variety of manufacturing processes including minerals and metals, gas and chemicals, food, beverage and tobacco, and forestry products (each make up about 20% of the group).
- 94% of these supervisors work full-time.
- Self-employment is about half the average level for all occupations.
- Women's share of employment in these occupations is about half of the average of all occupations, although the percentage of women has increased over the last 10 years.
- There are relatively few young workers, reflecting the need for work experience in these occupations.
- The unemployment rate is close to the national rate.
- Full-time earnings are slightly above average levels.
- Employment is highly sensitive to business conditions and is somewhat seasonal, especially in areas such as food processing.

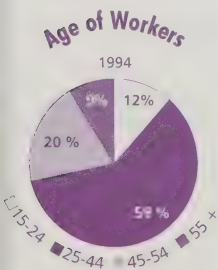
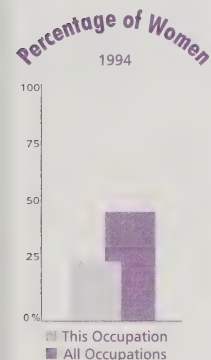
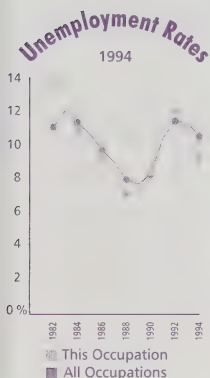
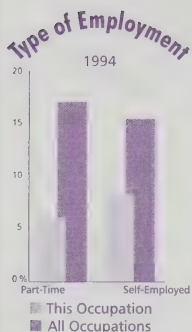
**Current labour market conditions for these supervisors are fairly good.**

## Looking to the Year 2000

Labour market conditions in this occupational group are expected to improve over the next five years but remain fairly good.

- The variety of industries employing these supervisors should provide a stabilizing influence if business conditions change dramatically in any one area.
- Increased opportunities may exist for new entrants with education and an aptitude for the application of robotics and computerized equipment in processing.
- The pulp and paper industry is expected to require fewer workers, and little growth in other food processing and wood products is expected over the next five years. However, growth is expected to be strong in a variety of other industries including plastic, metal fabrication and motor vehicles.

See also: This Occupation Code: 921.Vol. 2  
Field of Study Cross-index: U37, T316.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





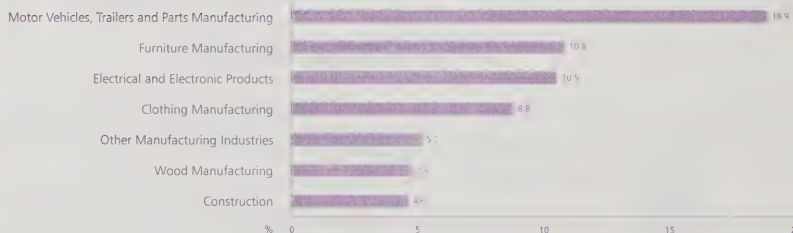
# Supervisors, Assembly and Fabrication

## At Work

These supervisors work for manufacturers of automobiles, vans and light trucks, electronics parts, components and systems, electrical components, appliances, motors and industrial equipment, furniture and fixtures, aircraft and aircraft parts, heavy trucks, trailers, buses, motor vehicle engines, transmissions, heating equipment, commercial refrigeration and similar metal products, clothing, fabric products, textiles, leather, and other miscellaneous products such as jewellery, clocks, watches, millwork, sporting goods and toys. Their duties may require them to:

- Direct, co-ordinate and schedule the activities of workers;
- Establish methods to meet work schedules and co-ordinate work with other departments;
- Ensure that systems and equipment operate efficiently;
- Resolve work problems and recommend measures to improve productivity and product quality;
- Requisition materials and supplies;
- Train staff in job duties, safety procedures and company policies; and
- Prepare production and other reports.

## Where They Work



## Education, Training and Experience

These supervisors usually require some high school education or a high school diploma.

- They usually need several years' experience as assemblers, fabricators, machine operators, testers, lead hands or inspectors, or have performed other work in the same company or industry.
- Supervisors in electronics manufacturing may require a two-year college program in electronics.

## Full-Time Earnings

1993

\$52,700

\$34,900

\$15,800

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

25,000 workers were employed in this group in 1994, an 18% increase over 1984 and slightly more than the economy-wide employment growth of 17%. Recent employment trends in this occupational group are favourable.

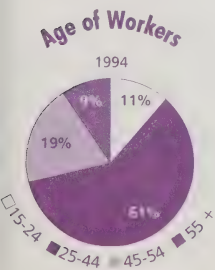
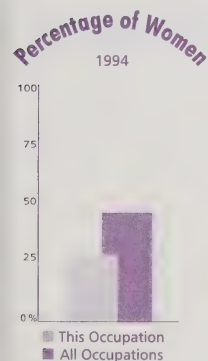
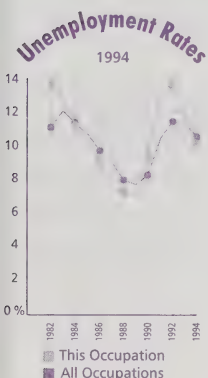
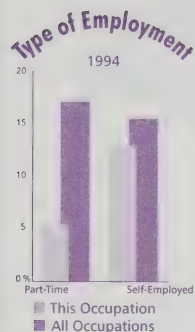
- 21% are supervisors in furniture and fixtures manufacturing, 19% are supervisors in motor vehicle manufacturing, and the rest work in a wide variety of supervisory positions.
- 95% work full-time.
- 13% are self-employed, just less than the average for all occupations.
- Women make up 27% of workers in these occupations, well below the average for all occupations.
- There are relatively few young workers compared to the overall work force, due to the work experience these occupations require.
- The unemployment rate in these occupations is at about the national rate.
- Full-time earnings are slightly below average levels.
- Employment in this group is very sensitive to business conditions but is not seasonal.

**Current labour market conditions for this group are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to improve over the next five years but remain fairly good.

- Moderate job growth for this group is expected to be led by manufacturers of motor vehicles, trailers and parts, furniture, electric and electronic products and metal fabrication.



See also: This Occupation Code: 922.  
Vol. 2 Field of Study Cross-index: C38, T37, T310, T318.  
For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Central Control and Process Operators in Manufacturing and Processing

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

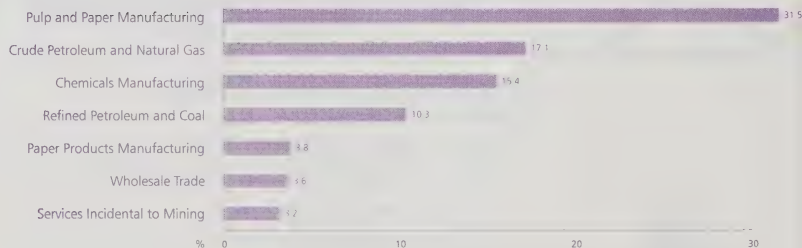
## At Work

These operators work in copper, lead, zinc and precious metal refineries, uranium and cement processing and aluminium plants, steel mills, and petroleum and natural gas processing, pipeline, petrochemical, industrial, agricultural, specialty chemical, pharmaceutical, pulp and paper companies, and other plants.

- Central control and process operators process mineral ores, metals and cement.
- Petroleum, gas and chemical process operators run and monitor petroleum, petrochemical and chemical plants, and monitor, adjust and maintain processing units and equipment.
- Pulping control operators control the processing of wood, scrap pulp and other cellulose materials to produce pulp.

This occupational group also includes cement manufacturing console operators, beater engineers, pulp and paper cooks and back tenders.

## Where They Work



## Education, Training and Experience

These operators usually require a high school diploma.

- Most need formal company training, on-the-job training and several years' experience as machine or process operators in the same company or department.
- Some may require an industrial first aid certificate.
- Petroleum, gas and chemical process operators may need a college diploma in process operation, sciences or a related subject and various certificates and licences.
- Pulping control operators may require a college or other program in forest products processing or a related subject.

## About these Occupations

19,000 people were employed in central control occupations in manufacturing and processing in 1994. Employment in this group declined by 14% over the 1984-94 period, while economy-wide employment grew by 17%. Recent employment trends in this occupational group are very unfavourable.

- 60% are employed in gas and chemical processing operations, and the balance work in pulp and paper operations.
- 97% work full-time.
- Only 4% are self-employed.
- Women make up only 14% of workers in this occupational group, less than a third of the average for all occupations.
- There are few young workers, reflecting the work experience and training required in these occupations.
- The unemployment rate is somewhat below the national average.
- Full-time earnings are above average and are the highest for comparable supervisory and control occupations.
- Employment in these occupations is somewhat sensitive to business conditions and somewhat seasonal.

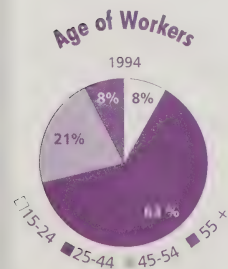
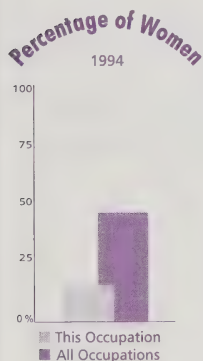
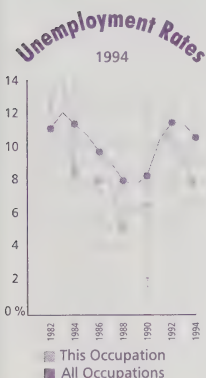
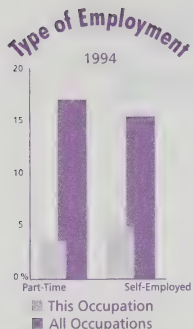
**Current labour market conditions in this occupational group are fairly good.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to improve from fairly good to good over the next five years.

- It is expected that job losses due to restructuring will end and that employment levels will again show growth, resulting in improved conditions for new entrants.
- Increased applications of computers may create more demand for workers with related skills.
- While the pulp and paper and chemical industries will require fewer workers from this group, new jobs are expected to occur in crude petroleum and natural gas mining, refined petroleum and coal, and a variety of other manufacturing industries, as well as in construction and logging and forestry.

See also: This Occupation Code: 923.  
Vol. 2 Field of Study Cross-index: U71, T316.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Machine Operators and Related Workers in Metal and Mineral Products Processing

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

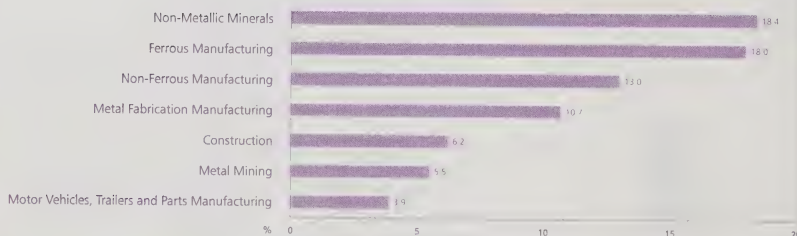
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work in copper, lead and zinc refineries, uranium processing plants, steel mills, aluminium plants, precious metal refineries, cement processing and other mineral and metal processing plants, foundries, glass and glass products, and concrete, clay and stone manufacturing companies.

- Machine operators in mineral and metal processing prepare and treat mineral ore and metal products.
- Foundry workers make foundry moulds and cores by hand or machine, pour molten metal into moulds to produce castings and operate foundry furnaces to melt metals.
- Glass forming and finishing operators produce glass, glassware, bottles and other glass products.
- Glass cutters hand-cut flat glass to specified sizes and shapes.
- Concrete, clay and stone forming and finishing operators cast and finish concrete products, and produce concrete, clay and stone products.
- Inspectors and testers in mineral and metal processing inspect, grade, sample and test raw materials and products made during these processing operations.

## Where They Work



## Education, Training and Experience

People in this group usually need some high school education.

- They usually require experience as labourers, machine operator helpers or other helper positions in their area of work.
- Mould makers of concrete products may require carpentry or woodworking experience for working with wooden forms.
- Inspectors and testers in mineral and metal processing may require experience as machine or process operators in that area of work.

## About these Occupations

34,000 were employed as machine operators in metal and mineral products in 1994. Employment in this group declined by 11% over the 1984-94 period, while economy-wide employment increased by 17%. Recent employment trends in this occupational group are unfavourable.

- 45% of this group are operators or inspectors in mineral and metal processing.
- 96% work full-time.
- Only 9% are self-employed, well below the average for all occupations.
- Women comprise only 12% of workers in these occupations, about a quarter of the average for all occupations.
- There are relatively few young workers, probably due to declining employment.
- The unemployment rate is close to the national rate.
- Full-time earnings in these occupations are slightly above average levels, the highest for any group of machine operators.
- Employment is extremely sensitive to business conditions and is highly seasonal.

**Current labour market conditions for this occupational group are fairly good.**

## Looking to the Year 2000

Labour market conditions for this group are expected to improve from fairly good to good over the next five years.

- The proportion of new labour supplied through immigration is expected to continue to exceed the average for other occupations but still represents less than 5% of the supply.
- Employment is distributed over a large number of industries. Relatively strong growth is expected in primary non-ferrous metals, metal fabrication, construction, metal mining and non-metallic mineral products.

## Work Prospects

1995 to 2000

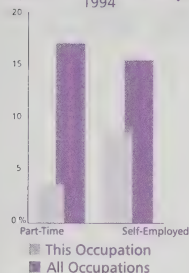
Getting Better

Stable

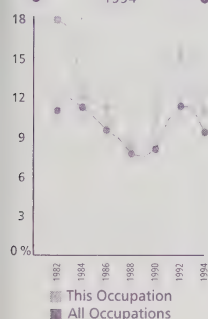
Getting Worse

How will labour market conditions change in this group?

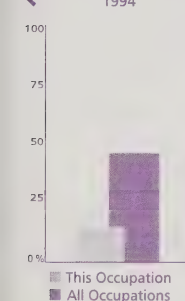
### Type of Employment



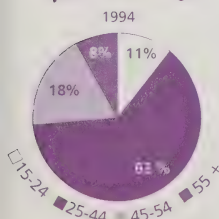
### Unemployment Rates



### Percentage of Women



### Age of Workers



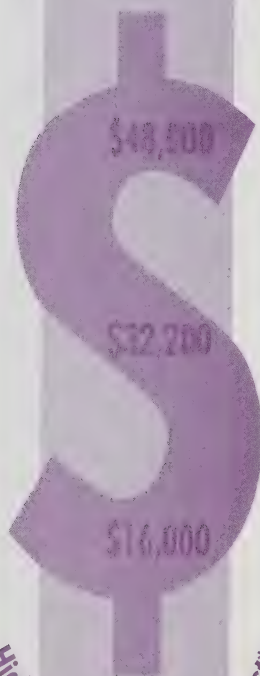
See also: This Occupation Code: 941.  
Vol. 2 Field of Study Cross-index: C34, T314, T318.  
For further information, see List of Associations.



# Machine Operators and Related Workers in Chemical, Plastic and Rubber Processing

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

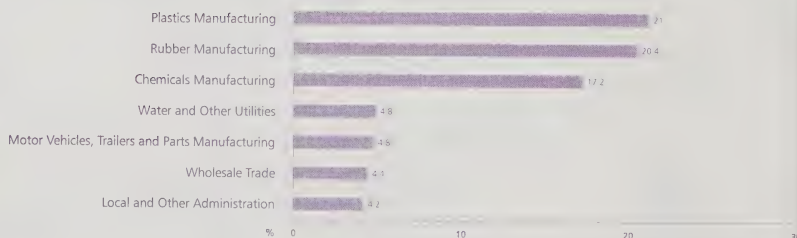
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work for chemical, cleaning compound, ink and adhesive industries, plastics and rubber products manufacturing companies, tire manufacturers, municipal governments, and other industries, institutions and organizations.

- Chemical plant machine operators run machinery to blend, mix, process and package a wide range of specialty chemicals, pharmaceuticals, and cleaning and toiletry products.
- Plastics processing machine operators set up and run mixing, calendering, extruding and moulding machines used to manufacture plastic parts and products.
- Rubber processing assemblers run machines and equipment, or use hand tools to assemble and finish rubber products.
- Rubber processing inspectors examine finished rubber products.
- Water and waste plant operators monitor and run computerized control systems and related equipment to regulate water treatment and distribution, and the treatment and disposal of sewage and wastes.

## Where They Work



## Education, Training and Experience

People in this group usually need some high school or a high school diploma.

- Some require on-the-job training and related work experience.
- Chemical plant machine operators may need formal company training programs, a Workplace Hazardous Materials Information System (WHMIS) certificate and other certifications.
- Plastics processing machine operators may need statistical process control courses.
- Plastics moulding process operators may need hydraulics, pneumatics and electronics systems courses.
- Water and waste plant operators must have courses in water pollution control.

## About these Occupations

37,000 were employed in this group in 1994. Employment grew by 4% over the 1984-94 period, while employment rose by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- 34% work in plastics processing, and 30% in rubber processing.
- 96% work full-time.
- Only 5% are self-employed, a third of the average for all occupations.
- Women make up 22% of workers in these occupations, only half the average for all occupations.
- The age distribution of workers in this group is similar to the overall work force.
- The unemployment rate is about the national average.
- Full-time earnings are somewhat below average levels but have shown a slight gain over the last five years.
- Employment is extremely sensitive to the business cycle but is only moderately seasonal.

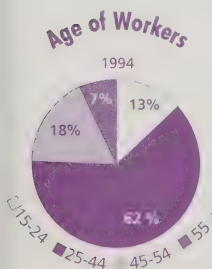
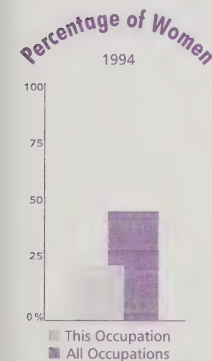
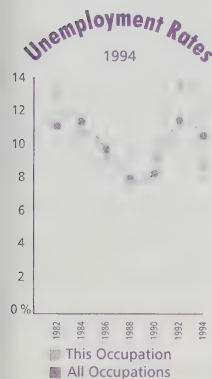
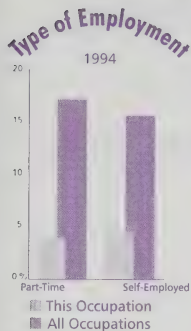
**Current labour market conditions in these occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to improve from fairly good to good over the next five years.

- Continuing demand for lighter and stronger materials in manufactured goods should work in favour of this occupational group.
- Increasing use of computerized equipment could improve prospects for new entrants with education or experience in that area.
- The plastics industry and the motor vehicle industry are expected to provide the most employment growth for this group, while employment in rubber will decline and employment in chemicals will remain unchanged.

See also: This Occupation Code: 942.  
Vol. 2 Field of Study Cross-index: U37, C34, T316.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# Machine Operators and Related Workers in Pulp and Paper Production and Wood Processing

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

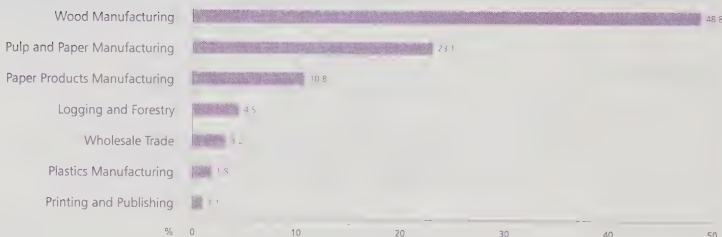
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work for sawmills, planing mills, pulp and paper and other wood processing companies, wood treatment and waferboard plants, and paper products manufacturers.

- Sawmill machine operators control automated equipment to saw, trim and plane rough lumber, and saw and split shingles and shakes.
- Pulp mill machine operators run and monitor screening equipment, digesters, mixing tanks and other machinery to produce pulp.
- Other wood processing machine operators remove bark from logs, produce wood chips, preserve and treat wood and produce waferboards, plywood and similar wood products.
- Lumber graders and other wood processing inspectors and graders inspect and grade lumber, shingles, particle board and similar products.

## Where They Work

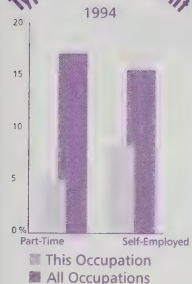


## Education, Training and Experience

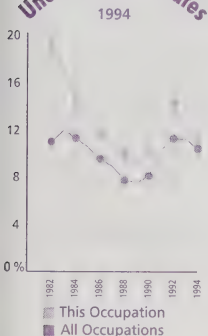
People in this group usually need some high school or a high school diploma.

- Employers usually provide on-the-job training and may provide formal training.
- They may require experience in operating various machines as labourers or utility maintenance workers.
- They may need an industrial first aid certificate.
- Pulp mill machine operators may require a college diploma in forest products processing or a related subject.
- Wood processing operators may need college or company courses.
- Lumber graders require a lumber grader's licence issued by a provincial lumber association.

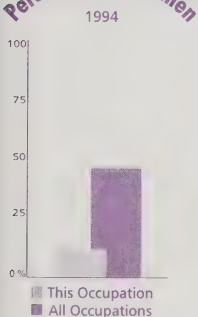
## Type of Employment



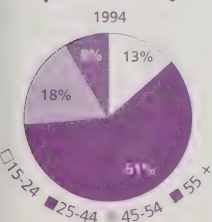
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

40,000 were employed in this group in 1994. Employment declined by 11% over the 1984-94 period while employment grew by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- Over 60% are sawmill operators, other wood processing machine operators or wood processing inspectors and graders. The rest are machine operators in pulp and paper, and paper converters.
- 95% work full-time.
- Only 8% are self-employed, about half the average for all occupations.
- Women make up 12% of these workers, about a quarter of the average.
- The age distribution of workers in these occupations is similar to the overall work force.
- The unemployment rate is somewhat above the national rate.
- Full-time earnings are slightly below average levels.
- Employment in these occupations is very sensitive to business conditions and is moderately seasonal.

**Current labour market conditions in these occupations are poor.**

## Looking to the Year 2000

Labour market conditions in these occupations are expected to improve from poor to fairly good over the next five years.

- The current round of industrial restructuring affecting this group is expected to end, creating somewhat better conditions in the years ahead for new entrants and unemployed workers.
- Increasing use of computerized equipment could improve prospects for those new entrants with education or experience with this equipment.
- Wood products, pulp and paper and paper products are all expected to require fewer workers over the next five years. This decline is expected to be offset to some degree by job growth in logging and forestry.

See also: This Occupation Code: 943.  
 Vol. 2 Field of Study Cross-index: T36, T312, T316.  
 For further information, see List of Associations.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



# Machine Operators and Related Workers in Textile Processing

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

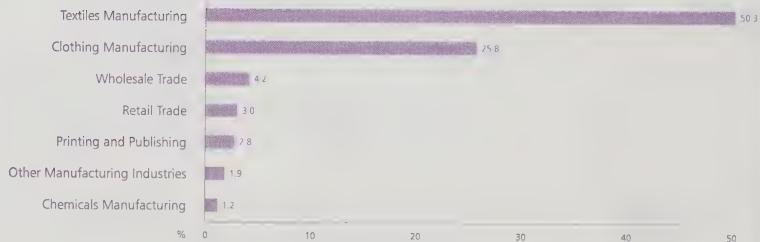
## At Work

People in this group work in textile manufacturing companies and garment, mattress and other fabric products manufacturing companies. Their job duties may require them to operate specialized machinery.

- Textile fibre and yarn preparation machine operators prepare textile fibres and spin, wind, reel and twist yarn and thread.
- Weavers operate looms to weave yarn and thread into textile fabrics and products.
- Other weaving workers reproduce patterns, perform drawing-in and warp tying activities and set up looms.
- Knitting machine operators produce knitted fabric, hosiery, garments and other products.
- Textile dyeing and finishing machine operators bleach, dye and finish yarn, thread, cloth and textile products.
- Textile inspectors, graders and samplers prepare samples and inspect and grade textile products.

This occupational group also includes card tenders, wool scourers, textile printing operators and perch operators.

## Where They Work



## Education, Training and Experience

People in this group may need some high school or a high school diploma.

- They may receive on-the-job training, whose length depends on the complexity of the product or process, the number of machines they will operate and whether they will perform equipment set-up and maintenance.
- Weavers, knitters and other workers in fabric-making occupations may require experience as labourers in their company.
- Textile inspectors, graders and samplers who inspect valuable and complex products may require experience as weavers, knitters or other fabric-making operators.

## About these Occupations

21,000 were employed as machine operators in textile processing in 1994. Employment declined by 17% over the 1984-94 period while employment grew by 17% economy-wide. Recent employment trends in this occupational group are very unfavourable.

- 37% are involved in fabric-making operations, and 26% operate dyeing and finishing machines.
- 94% work full-time.
- 10% are self-employed in these occupations, well below the average for all occupations.
- Women account for 43% of total employment, about average compared to all occupations but much higher than for other groups of machine operators.
- There are few young workers, probably because of declining employment.
- The unemployment rate is above the national rate.
- Full-time earnings are well below average levels.
- Employment in these occupations is only moderately sensitive to business conditions and is not seasonal.

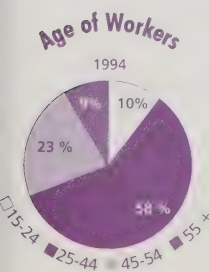
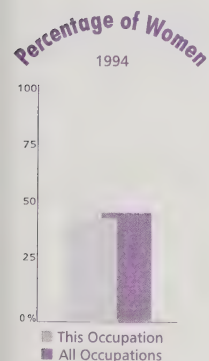
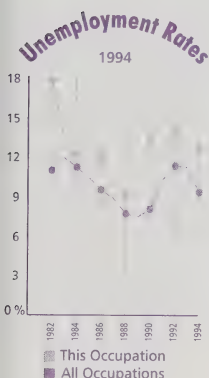
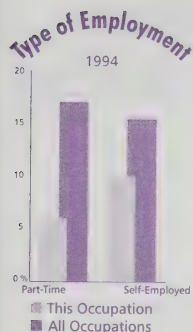
**Current labour market conditions in these occupations are poor.**

## Looking to the Year 2000

Labour market conditions in this group are expected to improve from poor to fairly good over the next five years.

- The improvement will be due in large part to reduced supply as older workers leave the group and relatively few school-leavers enter.
- Immigration is expected to continue to make a significant contribution to the new supply of workers, at about 10% or twice the average for all occupations.
- Ongoing restructuring of the textile industry in response to current or new international trade agreements may result in continued uncertainty for those entering these occupations.
- Due to declines in both clothing and textile employment, there will be little, if any, employment growth overall in this group. Some opportunities may exist in wholesale and retail trade.

See also: This Occupation Code: 944,  
Vol. 2 Field of Study Cross-index: C34, C35, T37, T318.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?





# Machine Operators and Related Workers in Fabric, Fur and Leather Products Manufacturing

## Full-Time Earnings

1993

\$34,500

\$21,200

\$50,400

## Highest, Average and Lowest\*

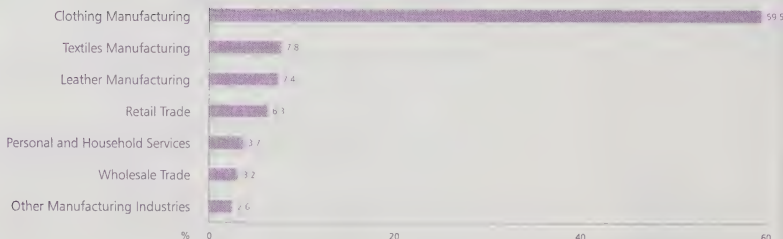
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,500 is the average for all occupations.

## At Work

People in this group work for furriers, manufacturers of clothing, footwear, textile and fur products, and companies that provide services such as leather tanning, fur dressing, and leather and fur dyeing.

- Sewing machine operators sew fabric, fur and synthetic materials to produce and repair garments and other articles. They also operate tackers, buttonhole makers, hemmers and other machines.
- Fabric cutters cut fabric to make parts for garments and other articles. They frequently use computerized cutting devices.
- Fur cutters cut pelts to make parts for garments and other articles.
- Leather cutters make parts for shoes, garments and other articles.
- Hide and pelt processing workers trim, scrape, clean, tan, buff and dye animal hides, pelts and skins to produce leather stock and finished furs.
- Inspectors and testers of fabric, fur and leather products manufacturing inspect and grade hides, pelts, leather, and garments and other manufactured fabric, fur and leather products.

## Where They Work



## Education, Training and Experience

People in this group usually require some high school education.

- Many receive on-the-job training.
- They usually require experience in the manufacturing of products.

## About these Occupations

73,000 were employed in this group in 1994, about 16% fewer than in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupational group are very unfavourable.

- 85% of workers in this group are sewing machine operators.
- 8% work part-time, about half the average of all occupations.
- Self-employment has grown and now approaches the average for all occupations.
- Women comprise 71% of this group, significantly more than average.
- There are few young workers relative to the overall work force, due to declining employment.
- The unemployment rate is well above the national rate.
- Full-time earnings are three fifths of average levels, the lowest for any machine operator occupational group in processing and manufacturing.
- Employment in these occupations is highly sensitive to economic conditions but is not seasonal.

**Current labour market conditions in these occupations are poor.**

## Looking to the Year 2000

Labour market conditions in this group are expected to improve from poor to fairly good over the next five years.

- Very few additional jobs are expected to be created over the next five years, as both clothing and leather industries require fewer workers from this group. However, job growth is expected in household and personal services as well as in both retail and wholesale trade.
- Improvement in labour market conditions will thus result from a decreased supply, with fewer new entrants and many workers leaving the occupations.
- Immigration will continue to play an important part in supplying labour to these occupations.

## Work Prospects

1995 to 2000

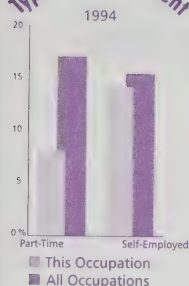
Getting Better

Stable

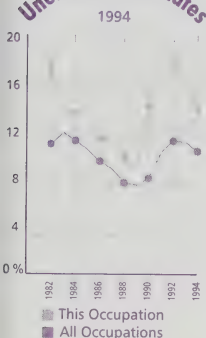
Getting Worse

How will labour market conditions change in this group?

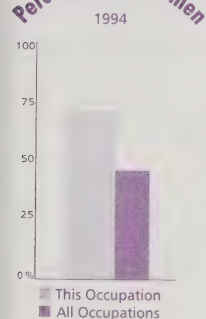
### Type of Employment



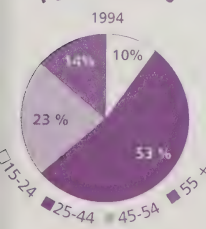
### Unemployment Rates



### Percentage of Women



### Age of Workers



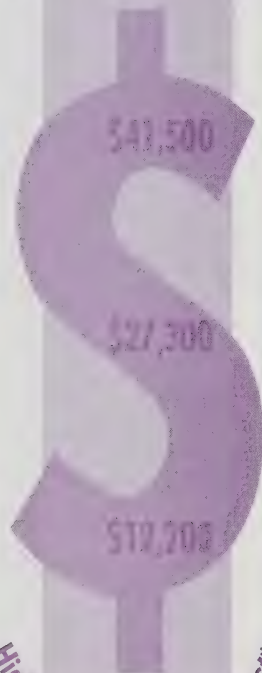
See also: This Occupation Code: 945.  
Vol. 2 Field of Study Cross-index: CU01, C03, C04, T37.  
For further information, see List of Associations.



# Machine Operators and Related Workers in Food, Beverage and Tobacco Processing

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

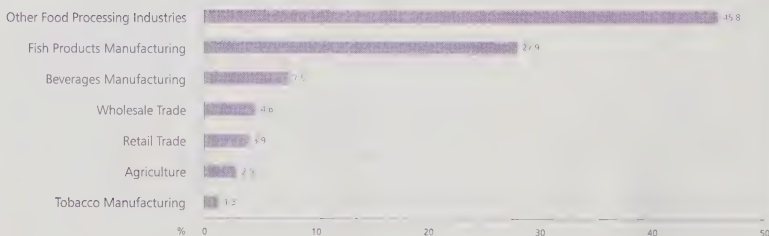
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

People in this group work in fruit and vegetable processing plants, dairies, flour mills, bakeries, sugar refineries, breweries, distilleries, meat and poultry slaughtering, processing and packing companies, fish and tobacco processing plants and other organizations.

- Process control and machine operators use multi-function or single-function machines to process and package food and beverage products.
- Industrial butchers slaughter livestock and split carcasses into smaller portions. They may slaughter livestock according to religious laws.
- Industrial meat cutters cut carcasses for further cutting or processing, and cut meat and poultry into specific cuts for wholesale use.
- Fish plant machine operators process and package fish products.
- Fish plant cutters and cleaners cut, trim and clean fish by hand.
- Tobacco processing machine operators prepare and treat tobacco leaves and produce tobacco products.
- Testers and graders working in food and beverage processing test and grade ingredients and finished food, beverage and tobacco products.

## Where They Work



## Education, Training and Experience

People in this group may require some high school education or a high school diploma.

- They may require experience in their particular industry or occupation.
- They usually receive on-the-job training.
- Industrial meat cutters must complete an industrial meat cutting program or have experience as industrial butchers or trimmers.

## About these Occupations

70,000 were employed in this occupational group in 1994, an increase of only 3% since 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- 44% are food processors, and 29% are fish plant workers.
- 14% work part-time in these occupations, slightly below the average for all occupations.
- 6% are self-employed, less than half the average for all occupations.
- Women make up 33% of workers in these occupations, well below average.
- There is a somewhat higher proportion of young workers than in the overall work force, indicating these are low-skill, entry-level occupations.
- The unemployment rate is much higher than the national rate.
- Full-time earnings are well below average levels.
- Employment is moderately sensitive to business conditions but can be seasonal as, for example, in fish processing.

**Current labour market conditions in these occupations are poor.**

## Looking to the Year 2000

Labour market conditions for this group are expected to improve slightly over the next five years but remain poor.

- With only limited job growth expected, improvement will come about as fewer workers enter this market and as workers leave these occupations in search of better job prospects.
- In particular, job prospects are expected to be worse for those involved in tobacco and fish processing. However, job growth is expected in other areas of food processing and in wholesale and retail trade.

## Work Prospects

1995 to 2000

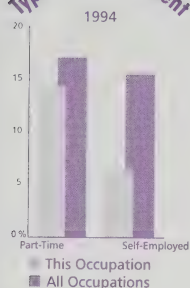
Getting Better

Stable

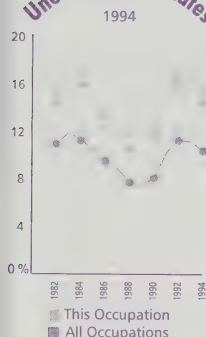
Getting Worse

How will labour market conditions change in this group?

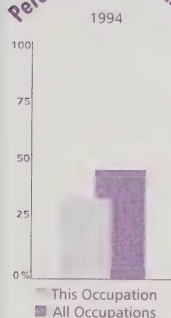
### Type of Employment



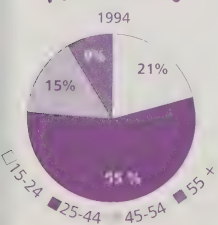
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 946.  
Vol. 2 Field of Study Cross-index: T81, T82.  
For further information, see List of Associations.





# Printing Machine Operators and Related Occupations

## At Work

These people work for rapid printing services, commercial printing companies and in-house binding and finishing departments, colour graphics, platemaking and cylinder preparation firms, newspapers, magazines, film processing and retail photofinishing organizations and for government.

- Printing machine operators use laser printers, computerized high-speed colour copiers and other printing machines to print text, illustrations and designs.
- Printing press operators print illustrations, designs and text on paper, plastic and other material. They may supervise crews of large presses.
- Camera and platemaking workers operate cameras and scanners, assemble film and negatives, and prepare, engrave and etch printing press plates and cylinders.

This occupational group also includes photographic and film processors, cylinder preparers, film assemblers/strippers, platemakers, pre-press technicians, scanner operators, and binding and finishing machine operators.

## Where They Work



## Education, Training and Experience

People in this group usually must have a high school diploma. Some receive on-the-job training.

- Printing machine operators may require college or other printing courses.
- Printing press operators usually require a college printing technology diploma or an apprenticeship, or a combination of on-the-job training and specialized courses.
- Camera, platemaking and other pre-press occupations and binding and finishing machine operators require a college program in graphics arts technology, or an apprenticeship, or a combination of on-the-job training and specialized courses.

## Full-time Earnings

1993

\$52,100

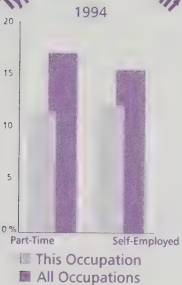
\$34,900

\$14,300

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Type of Employment



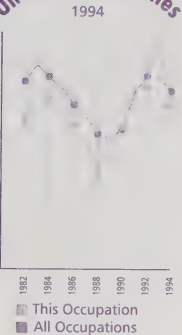
## About these Occupations

64,000 were employed in this group in 1994, only 1% more than in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- 60% are printing press and printing machine operators.
- 11% work part-time, well below the average for all occupations.
- 12% are self-employed, slightly below the average for all occupations.
- Women make up 35% of those working in these occupations, below the average for all occupations.
- The age distribution of workers is similar to the age distribution of the overall work force.
- The unemployment rate in these occupations is at about the national rate.
- Full-time earnings in these occupations are below average levels.
- Employment in these occupations is somewhat affected by economic conditions and is not seasonal.

**Current labour market conditions for this group are fairly good despite weakness remaining from the 1991-92 recession.**

## Unemployment Rates



## Looking to the Year 2000

Labour market conditions in these occupations are expected to worsen somewhat over the next five years but remain fairly good.

- Immigration will be an important factor in this job market, contributing almost 6% of the supply of new labour.
- Although employment may decline in printing and publishing resulting in slow overall growth, job growth is expected in other industries such as business services and retail trade.

## Work Prospects

1995 to 2000

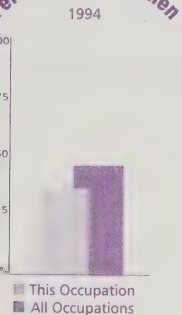
Getting Better

Stable

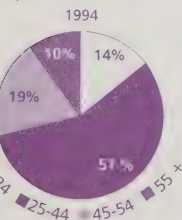
Getting Worse

How will labour market conditions change in this group?

## Percentage of Women



## Age of Workers



See also: This Occupation Code: 947.  
Vol. 2 Field of Study Cross-index: U01, U822, C05, T04.  
For further information, see List of Associations.



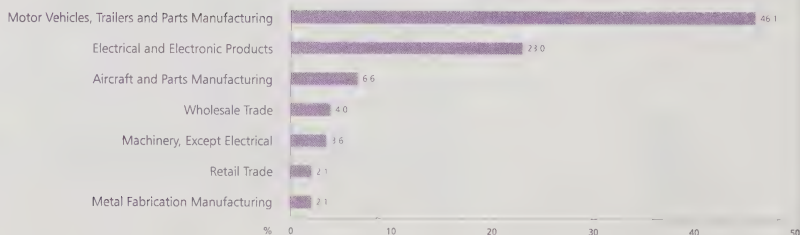
# Mechanical, Electrical and Electronics Assemblers

## At Work

These people work for manufacturers of aircraft and aircraft subassemblies, motor vehicles, electronics, electrical appliances and electrical equipment, machinery and transportation equipment, industrial electric motors, transformers, control equipment, railway locomotives, transit vehicles and other heavy electrical equipment.

- Aircraft assemblers work with prefabricated parts to manufacture aircraft subassemblies and aircraft.
- Motor vehicle assemblers work with motor vehicle parts to produce subassemblies and finished motor vehicles.
- Assemblers of electrical appliances, apparatus and equipment manufacturing work with prefabricated parts to produce household, commercial and industrial appliances and equipment.
- Assemblers and fabricators of industrial electrical motors and transformers produce heavy-duty industrial electrical equipment.
- Mechanical assemblers produce a wide variety of mechanical products such as trucks, buses and automotive engines.
- Machine operators of electrical apparatus manufacturing machinery or equipment produce electrical parts and products.
- Inspectors and testers inspect and test products for conformity to standards and specifications.

## Where They Work



## Education, Training and Experience

People in this group need some high school or a high school diploma.

- Most receive on-the-job training.
- Aircraft assemblers and inspectors may require aviation or aeronautical technology programs emphasizing aircraft manufacturing.
- Most inspectors and testers usually require experience as assemblers or other workers in their companies or industries.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

138,000 were employed in this occupational group in 1994 — 17% more than in 1984. Over the same period economy-wide employment grew by the same rate. Recent employment trends in this occupational group are favourable.

- About half work in motor vehicle assembly and about 20% work in electronics.
- 97% work full-time.
- Few are self-employed, less than half the average proportion for all occupations.
- Women account for about 17% of total employment, less than half the average for all occupations.
- There are relatively few young workers, reflecting the need for work experience.
- The unemployment rate is at about the national rate.
- Full-time earnings are slightly below average levels.
- Employment in these occupations is highly sensitive to economic conditions and is moderately seasonal.

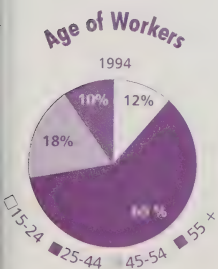
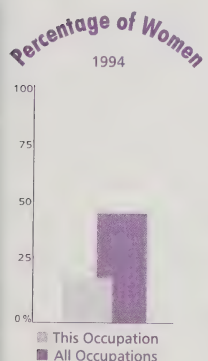
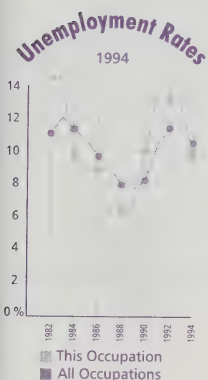
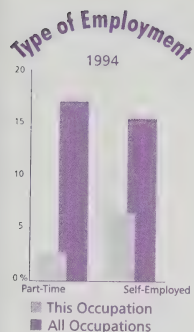
**Current labour market conditions in these occupations are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions for mechanical and electrical assemblers are expected to improve over the next five years but remain fairly good.

- Market conditions may be better for those specializing in work related to electronics, given growing consumer demand for computers and other electronic equipment.
- Moderate job growth is expected to be centred in the motor vehicle industry as well as in electric and electronic products, while employment in the aircraft industry for this group is expected to decline.

See also: This Occupation Code: 948. Related Codes: 9482, 9483.  
Vol. 2 Field of Study Cross-index: C38, T310, T314, T315, T318.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





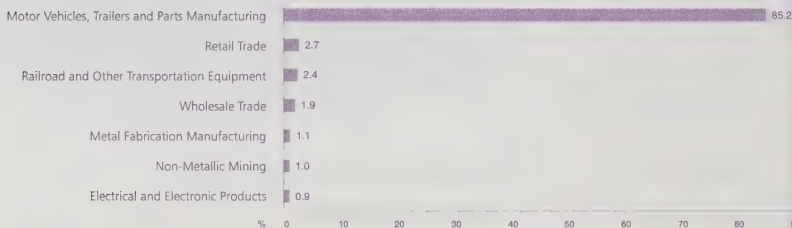
# Motor Vehicle Assemblers, Inspectors and Testers

## At Work

People in this occupation work in plants that manufacture automobiles, vans and light trucks.

- Motor vehicle assemblers put together and install prefabricated motor vehicle parts and components to form subassemblies and finished motor vehicles. They may use hand and power tools and equipment, and automated assembling equipment such as robotic and fixed automation equipment.
- Motor vehicle inspectors and testers inspect and test parts, subassemblies and finished products to ensure that they perform properly and conform to quality standards. They may use testing devices such as meters, analyzers and timing lights, and drive and test motor vehicles on roll testing devices to make sure that vehicles function properly.

## Where They Work



## Education, Training and Experience

People in this occupation usually must complete high school.

- They normally gain the skills required for their occupation through on-the-job training.
- They may have job mobility within the same production department.
- With experience, they may progress to supervisory positions.

## Full-Time Earnings

1993

\$49,100

\$34,900

\$18,500

## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

64,000 were employed as motor vehicle assemblers in 1994 — 41% more than in 1984. Over the same period, employment grew by 17% economy-wide. Recent employment trends in this occupation are highly favourable.

- 97% work full-time.
- Women make up 25% of motor vehicle assemblers, about half the average for all occupations.
- There are relatively few young workers, suggesting that employers value work experience.
- The unemployment rate is at about the national rate.
- Full-time earnings are at average levels.
- Employment is extremely sensitive to business conditions and is highly seasonal.

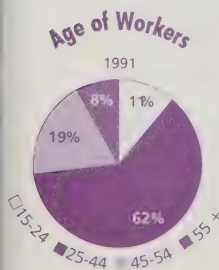
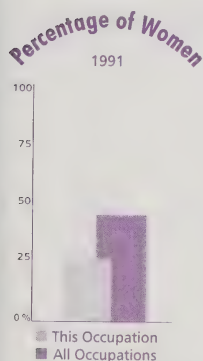
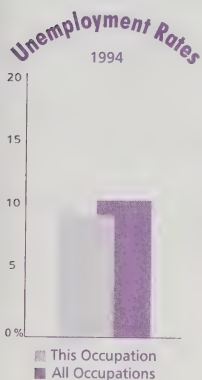
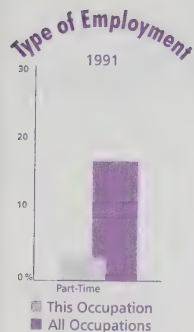
**Current labour market conditions for motor vehicle assemblers are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

Labour market conditions in this occupation are expected to improve over the next five years but remain fairly good.

- Market conditions may be better for those who can demonstrate an aptitude for working with high-technology applications in assembly.
- Good job growth in the motor vehicle assembly industry over the next five years is expected to provide most new jobs for this group.

See also: This Occupation Code: 9482. Related Code: 948.  
Vol. 2 Field of Study Cross-index: T310, T312, T314, T316.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?



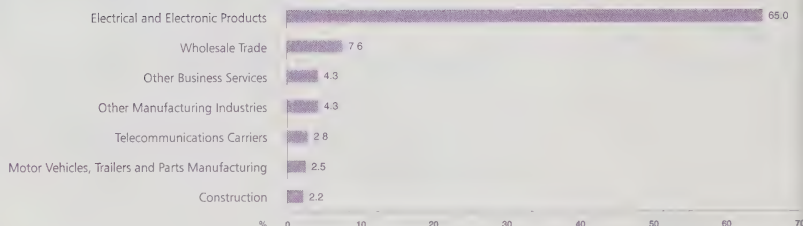
# Electronics Assemblers, Fabricators, Inspectors and Testers

## At Work

People in this group work in electronics manufacturing plants.

- Electronics assemblers solder and manually assemble electronic components such as resistors, diodes, transistors, capacitors and integrated circuits to designated locations on printed circuit boards. They perform fine hand assembly using microscopes, hand and small power tools and automatic and semi-automatic machines.
- Electronics fabricators operate and monitor process equipment including automatic and semi-automatic machines to fabricate electronic components and solder, clean, seal and stamp components.
- Electronics inspectors check assembled and fabricated electronics components and assemblies to make sure they conform to specified requirements. They inspect final assemblies for finish, labelling and packaging and perform "go-no-go" electrical tests to check mechanical dimensions.
- Electronics testers operate test equipment and tools to perform simple electrical and continuity testing of electronic components, parts and systems. They compare test results to specifications, and identify parts and products for repair and replacement.

## Where They Work



## Education, Training and Experience

People in this group usually must complete some high school.

- Electronics testers may require specialized training after high school in basic electronic theory, testing techniques and testing equipment.
- Electronics inspectors may need experience as electronics assemblers or component fabricators.
- With additional training and experience, electronics assemblers and component fabricators may progress to electronics inspectors and testers.

## Full-Time Earnings

1993

\$42,500

\$27,500

\$14,200

Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

28,000 were employed in this occupation in 1994 — about 6% fewer than in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupation are unfavourable.

- 95% work full-time.
- 60% of electronic assemblers and testers are women, well above the national average.
- The age distribution of workers in this occupation is similar to the overall work force.
- The unemployment rate is at about the national rate.
- Full-time earnings in this occupation are below average levels.
- Employment is sensitive to business conditions but is not seasonal.

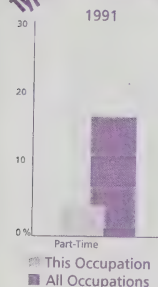
**Current labour market conditions in this occupation are fairly good despite weakness remaining from the 1991-92 recession.**

## Looking to the Year 2000

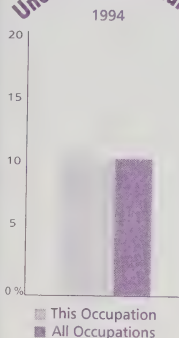
Labour market conditions in this occupation are expected to improve over the next five years but remain fairly good.

- Demand from employers will continue to grow, given increasing consumer demand for computers and other electronic equipment. However, the domestic economy has failed to capture many assembly-line jobs created by the explosion of computer use, and most electronic products are assembled overseas.
- Wholesale trade, followed by electric and electronic products and other business services, is expected to lead strong job growth for this group.

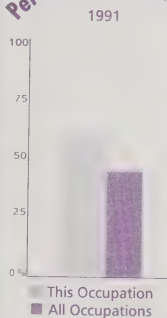
Type of Employment



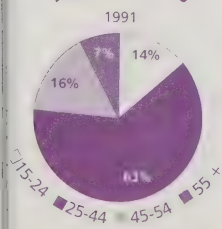
Unemployment Rates



Percentage of Women



Age of Workers



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 9483. Related Code: 948.  
Vol. 2 Field of Study Cross-index: U35, C38, T71, T310.  
For further information, see List of Associations.





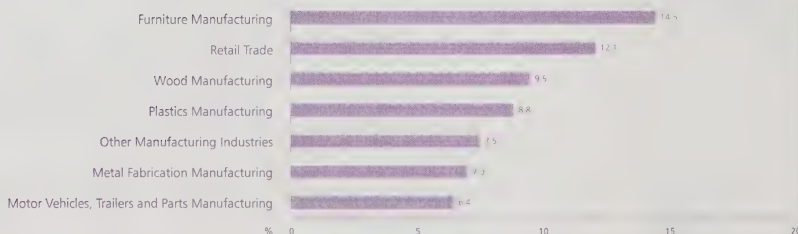
# Other Assembly and Related Occupations

## At Work

People in this group work in marine craft, furniture, and wood, plastic, and metal products manufacturing companies, and furniture refinishing and customized metal plating and coating shops. They may also be self-employed.

- Boat assemblers put together wooden, fibreglass and metal boats.
- Furniture and fixture assemblers put parts together to form subassemblies and completed furniture and fixtures.
- Wood products assemblers put together a variety of wood products.
- Furniture finishers finish new wood or metal furniture to specified colour and finish.
- Painters and coaters in manufacturing use machines, brushes and spray equipment to apply paint and other non-metallic coatings.
- Plating, metal spraying and related operators run machines and equipment to apply metallized substances to metal and other objects.
- Assembly inspectors inspect subassemblies and finished products to ensure product quality.
- Other assemblers put together a variety of products such as jewellery, clocks, musical instruments and toys.

## Where They Work



## Education, Training and Experience

People in this group usually need some high school education.

- They usually receive on-the-job training.
- Furniture finishers and some industrial painters such as aircraft painters may require college courses or specialized training.
- Plating and metal spraying operators may need experience in operating production machinery.
- Assemblers, finishers and inspectors may need experience as labourers, helpers or assemblers.

## Full-Time Earnings

1993

\$34,900

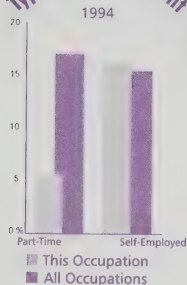
\$28,150

\$18,300

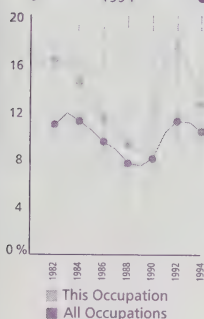
## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

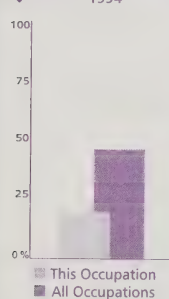
## Type of Employment



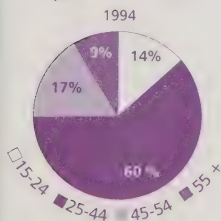
## Unemployment Rates



## Percentage of Women



## Age of Workers



## About these Occupations

80,000 were employed in this occupational group in 1994, an increase of 13% over 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- Painters and coaters, and furniture and fixture workers each make up about 20% of this group.
- 94% work full-time.
- The proportion of self-employed workers is at about the average for all occupations.
- Women make up about 20% of those employed in these occupations, less than half the average for all occupations.
- The age distribution of workers in this group is similar to that of the overall work force.
- The unemployment rate is higher than the national rate.
- Full-time earnings in these occupations are about four fifths of average levels.
- Employment is very sensitive to business conditions but is only moderately seasonal.

**Current labour market conditions in these occupations are poor.**

## Looking to the Year 2000

Labour market conditions for this group are expected to improve from poor to fairly good over the next five years.

- The strength of the domestic economy plays a large role in the outlook for this group as many occupations are geared to production for domestic consumption.
- Employment growth will come from a variety of industries led by furniture, plastics, metals fabrication and retail trade.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 949.  
Vol. 2 Field of Study Cross-index: T37, T312, T314, T316, T318.  
For further information, see List of Associations.



# Machining, Metalworking, Woodworking and Related Machine Operators

## Full-Time Earnings

1993

\$51,900

\$33,500

\$16,700

## Highest, Average and Lowest\*

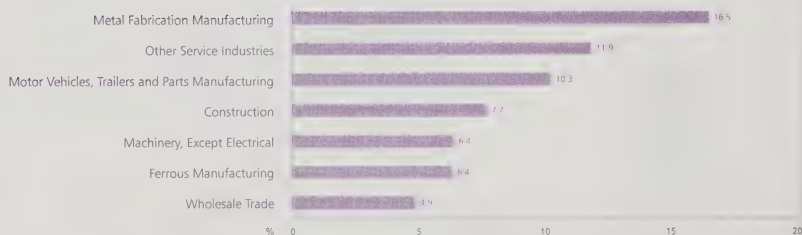
\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## At Work

These machine operators work for heavy machinery, transportation equipment, aircraft and ship building industries, sheet metal and machine shops, and manufacturers of furniture, fixtures and other wood products, light metal, structural steel fabrication, boilers and platework.

- Machining tool operators turn, mill, drill, bore, plane, hone, broach and grind to produce machined parts. They may etch or chemically mill metal pieces.
- Forging machine operators form metal into shapes and impart hardness, strength and other characteristics.
- Woodworking machine operators fabricate and repair parts for wood products.
- Light metalworking machine operators shape and form sheet and light metal into parts and products.
- Heavy metalworking machine operators shape and form steel or other heavy metal into parts or products.
- Welding machine operators fabricate and repair metal parts using spot, butt and seam resistance machines or gas and arc welding machines.
- Brazing and soldering machine operators bond metal parts and fill holes, indentations and seams of metal articles with solder.
- Other metal products machine operators run machines such as wire looms to produce metal parts and products such as fencing, nails and chains.

## Where They Work



## Education, Training and Experience

These machine operators usually require some high school education.

- They usually receive on-the-job training.
- They may need experience as labourers or helpers in their company.

## About these Occupations

121,000 were employed in this occupational group in 1994, about 6% fewer than in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupational group are very unfavourable.

- Welders and welding, soldering and brazing machine operators make up 60% of this group.
- 97% work full-time.
- 10% are self-employed, below the average for all occupations.
- Women make up only 10% of workers in this group.
- There are relatively few young workers compared to the age distribution of the overall work force.
- The unemployment rate is above the national rate.
- Full-time earnings are slightly below average levels.
- Employment in these occupations is very sensitive to business conditions but is only slightly seasonal.

**Current labour market conditions for this group are poor.**

## Looking to the Year 2000

Labour market conditions for this group are expected to improve from poor to fairly good over the next five years.

- Those with the ability to work with high technology applications in these occupations may have better opportunities.
- Strong growth in services dealing with metal-related industries is expected to be the source of most job growth over the next five years, followed by primary metals, metal fabrication and construction.

## Work Prospects

1995 to 2000

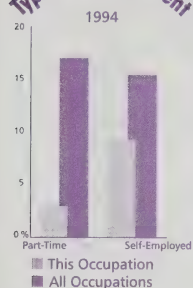
Getting Better

Stable

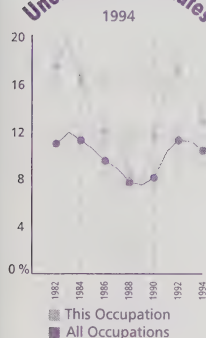
Getting Worse

How will labour market conditions change in this group?

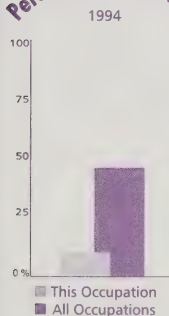
### Type of Employment



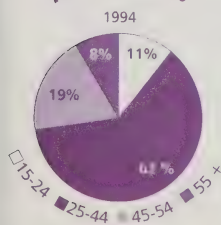
### Unemployment Rates



### Percentage of Women



### Age of Workers



See also: This Occupation Code: 951. Related Codes: 9510, 9511, 9514. Vol. 2 Field of Study Cross-index: T314, T315, T316, T318. For further information, see List of Associations.





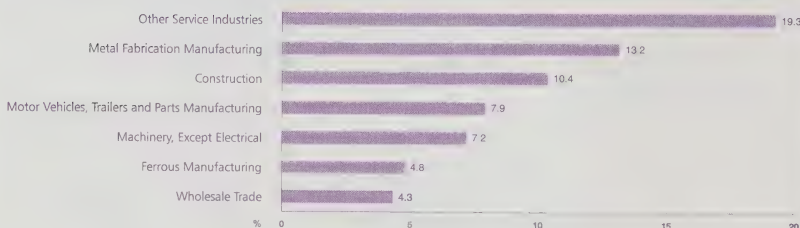
# Welders and Soldering Machine Operators

## At Work

People in this occupation work in companies that manufacture structural steel and platework, boilers, heavy machinery, aircraft, ships, transportation and other metal products. Welders are also employed by welding contractors, welding shops and other industrial sectors, or they may be self-employed.

- Welders operate manual and semi-automatic welding equipment to weld ferrous and non-ferrous metals following blueprints and welding process specifications. They may specialize in certain types of welding such as ship building, aerospace precision welding and pipeline construction welding.
- Welding machine operators use previously set up welding machines such as spot, butt and seam resistance or gas and arc welding machines to fabricate and repair metal parts.
- Brazing and soldering machine operators use previously set up brazing and soldering machines to bond metal parts and to fill holes, indentations and seams of metal articles with solder.

## Where They Work



## Education, Training and Experience

People in this occupation usually must have some high school education.

- To gain trade certification, welders must usually complete a three-year apprenticeship program, or a combination of over three years' experience and some college or industry courses in welding.
- Trade certification for welders is compulsory in Nova Scotia and Alberta. It is available, but voluntary, in Newfoundland, Prince Edward Island, New Brunswick, Manitoba, Saskatchewan, the Northwest Territories and the Yukon. Qualified welders may also obtain interprovincial trade certification (Red Seal) which provides job mobility throughout the country.
- Welding, brazing and soldering machine operators usually require several months' on-the-job training and may require experience as machine operator helpers.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

72,000 welders and welding, brazing and soldering machine operators were employed in 1994, about the same as in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupation are very unfavourable.

- 96% work full-time.
- Women make up only 3% of workers in this occupation.
- There are relatively few young workers in this occupation compared to the age distribution of the overall work force.
- Unemployment rates are above the national rate.
- Full-time earnings are slightly above average levels.
- Employment in this occupation is extremely sensitive to business conditions and is somewhat seasonal.

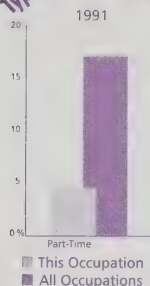
**Current labour market conditions in this occupation are poor.**

## Looking to the Year 2000

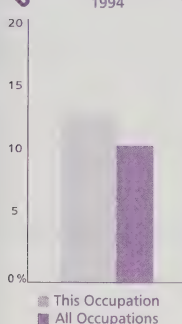
Labour market conditions are expected to improve from poor to fairly good over the next five years.

- Those with the ability to work with high technology applications in this occupation may have better opportunities.
- Most new job growth is expected to be centred in services to industry, and in primary metals and metal fabrication.

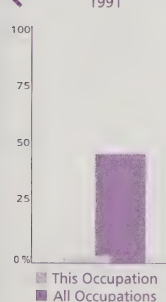
**Type of Employment**



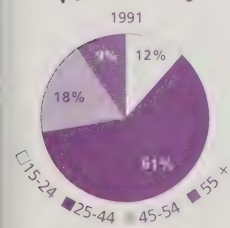
**Unemployment Rates**



**Percentage of Women**



**Age of Workers**



## Work Prospects

1995 to 2000

**Getting Better**

**Stable**

**Getting Worse**

How will labour market conditions change in this group?

See also: This Occupation Code: 9510. Related Code: 951.  
Vol. 2 Field of Study Cross-index: T310, T312, T314, T316.  
For further information, see List of Associations.



# Machining Tool Operators

## At Work

Machining tool operators work for machine shops and metal products and other manufacturing companies. Their duties may require them to:

- Interpret job orders and blueprints to determine machining operations;
- Set up and operate machines to perform operations such as turning, milling, drilling, boring, planing, honing, broaching and grinding;
- Verify dimensions of machined parts using precision measuring instruments; and
- Prepare etching solution and immerse metal parts or work pieces in solution to remove unwanted portions.

This occupation includes milling machine set-up operators, production gear cutters, and operators of lathe machines, boring mills, radial drills and numerical control machines. It also includes workers who etch or chemically mill metal pieces.

## Full-Time Earnings

1993

\$49,500

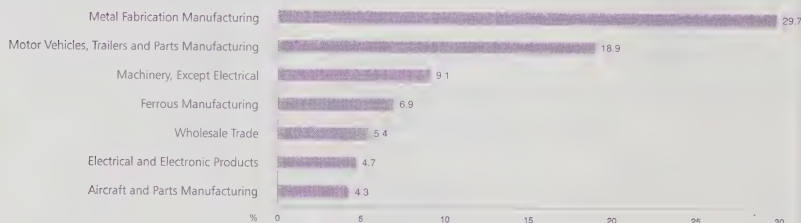
\$33,600

\$18,400

Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## Where They Work



## Education, Training and Experience

Machining tool operators must complete some high school education.

- They may require college or other courses in machining.
- They usually receive several months' on-the-job training.
- Senior positions, such as set-up operator, require that workers have experience as machine operators.
- Experienced operators may become machinists through apprenticeship training.

## About this Occupation

11,000 were employed in this occupation in 1994, about 10% fewer than in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupation are very unfavourable.

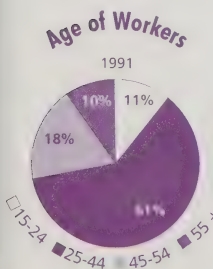
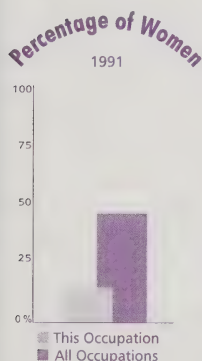
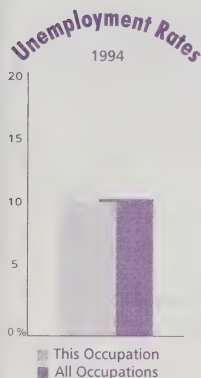
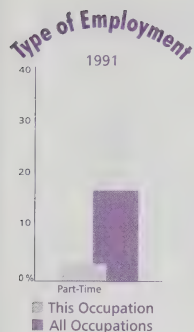
- 97% work full-time.
- Women make up 12% of workers in this occupation, about a quarter of the average for all occupations.
- There are relatively few young workers compared to the age composition of the overall work force.
- The unemployment rate is at about the national rate.
- Full-time earnings in this occupation are slightly below average levels.
- Employment is extremely sensitive to business conditions but is not seasonal.

**Current labour market conditions in this occupation are fairly good.**

## Looking to the Year 2000

Labour market conditions are expected to improve from fairly good to good over the next five years.

- Those with the ability to work with high technology applications in this occupation may have better opportunities.
- Most new jobs are expected to be in primary metals and metal fabrication, in machinery or in motor vehicles, trailers and parts.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 9511. Related Code: 951.  
Vol. 2 Field of Study Cross-index: C12, T71, T314, T316.  
For further information, see List of Associations.





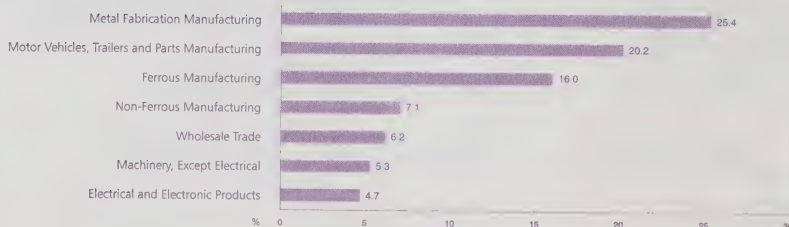
# Metalworking Machine Operators

## At Work

Light metalworking machine operators work for sheet metal products manufacturing companies, sheet metal shops and other light metal products manufacturing organizations. Heavy metalworking machine operators are employed by structural steel fabrication, boiler and platework manufacturing companies, and by heavy machinery companies. Their duties may require them to:

- Read specifications or follow verbal instructions;
- Set up and operate metalworking machines to cut, bend, roll, ream, punch and drill, or otherwise shape and form, metal stock into parts and products;
- Operate machines that weld, solder, bolt, screw and rivet metal parts together;
- Check products for correct shapes, dimensions and other specifications;
- Select and transport material manually or using cranes or hoists; and
- Clean and lubricate equipment and replace parts as required.

## Where They Work



## Education, Training and Experience

Metalworking machine operators must complete some high school education.

- They usually receive on-the-job training.
- They may require previous experience as labourers or helpers in the same company.
- With experience, they may progress to positions such as structural metal fabricator or supervisory positions.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About this Occupation

17,000 were employed as metalworking machine operators in 1994, about 25% fewer than in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupation are very unfavourable.

- 96% work full-time.
- Women make up 14% of workers in this occupation, less than a third of the average for all occupations.
- There are relatively few young workers, compared to the age distribution of the overall work force.
- The unemployment rate is above the national rate.
- Full-time earnings are below average levels.
- Employment is extremely sensitive to business conditions and is mildly seasonal.

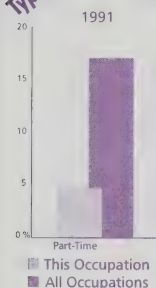
**Current labour market conditions in this occupation are poor.**

## Looking to the Year 2000

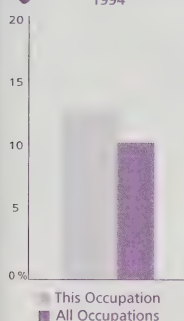
Labour market conditions are expected to improve from poor to fairly good over the next five years.

- Those with the ability to work with high technology applications in this occupation may have better opportunities.
- Primary metals and construction are expected to lead job growth for this occupation over the next five years. Metal fabrication and motor vehicle, trailers and parts manufacturers are expected to require fewer workers.

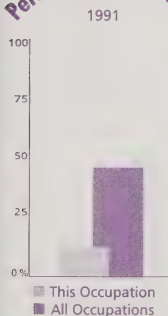
**Type of Employment**



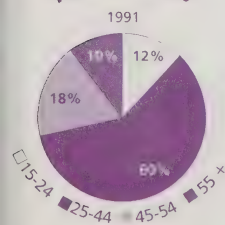
**Unemployment Rates**



**Percentage of Women**



**Age of Workers**



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?

See also: This Occupation Code: 9514. Related Code: 951.  
Vol. 2 Field of Study Cross-index: C38, C312, T314, T318.  
For further information, see List of Associations.

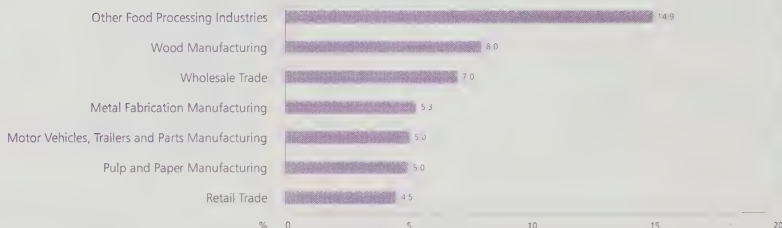
# Labourers in Processing, Manufacturing and Utilities

## At Work

These labourers work for a wide variety of manufacturing and processing companies such as those involved in copper, lead and zinc refining, uranium processing, clay, glass and stone processing, heavy machinery manufacturing, textiles, rubber and plastic products manufacturing, petroleum and natural gas processing, pulp and paper processing, food, beverage, tobacco and fish processing, clothing, footwear and furniture manufacturing, electrical and electronic products manufacturing and printing and packaging. Their duties may require them to:

- Transport raw materials;
- Load, unload, sort, check and weigh raw materials and products;
- Feed machines such as conveyers, crushers, saws and processing machines;
- Clean work areas and equipment; and
- Assist more skilled workers.

## Where They Work



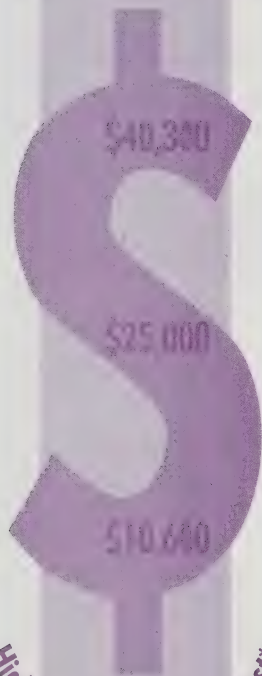
## Education, Training and Experience

Labourers may require some high school education.

- Labourers in wood, pulp and paper processing working in the pulp and paper industry and for other large employers must have a high school diploma.
- With experience, most labourers may progress to machine operating positions or other more skilled jobs within their area of work.

## Full-Time Earnings

1993



## Highest, Average and Lowest\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of workers. \$34,900 is the average for all occupations.

## About these Occupations

198,000 were employed in this group in 1994, only 1% more than in 1984. Over the same period, employment increased by 17% economy-wide. Recent employment trends in this occupational group are unfavourable.

- 23% work in utilities, followed by 21% in food, beverage and tobacco.
- 11% work part-time, below the average of all occupations.
- The proportion of self-employed workers is less than half the average for all occupations.
- Women make up 25% of all workers in these occupations.
- There are relatively more young workers than in the overall work force.
- The unemployment rate is above the national rate.
- Full-time earnings are less than three quarters of average levels.
- Employment is very sensitive to business conditions and may be seasonal, depending on the type of manufacturing process involved.

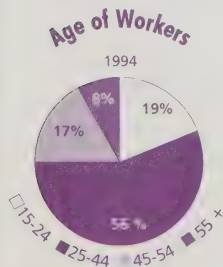
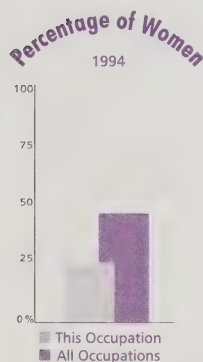
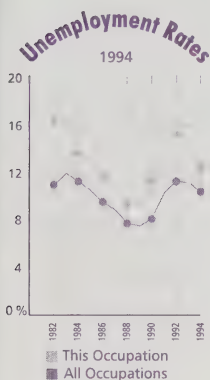
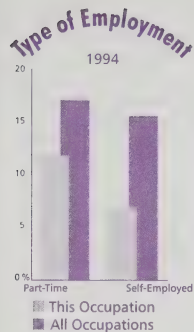
**Current labour market conditions in these occupations are poor.**

## Looking to the Year 2000

Labour market conditions for this group are expected to improve from poor to fairly good over the next five years.

- Food processing, motor vehicles, metal fabrication and wholesale and retail trade are expected to provide most of the new job opportunities for this group over the next five years.

See also: This Occupation Code: 961.  
Vol. 2 Field of Study Cross-index: T37, T316, T318.  
For further information, see List of Associations.



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

How will labour market conditions change in this group?





# List of Associations by Occupation

## 001

Public Service Commission of Canada  
A1855-300 Laurier Avenue West Tower  
Ottawa, Ontario K1A 0M7  
Fax: (613) 996-5204

## 011

Canadian Public Personnel Management Association  
252 Bloor Street West, 11th Floor  
Toronto, Ontario M5S 1V5  
Fax: (416) 325-0308

Certified General Accountants Association of Canada  
700-1188 West Georgia Street  
Vancouver, British Columbia V6E 4A2  
Fax: (604) 689-5845

Purchasing Management Association of Canada  
1414-2 Carlton Street  
Toronto, Ontario M5B 1J3  
Fax: (416) 977-8886

The Society of Management Accountants of Canada  
120 King Street West  
P.O. Box 176  
Hamilton, Ontario L8N 3C3  
Fax: (905) 525-4533

## 0111

Certified General Accountants Association of Canada  
700-1188 West Georgia Street  
Vancouver, British Columbia V6E 4A2  
Fax: (604) 689-5845

The Society of Management Accountants of Canada  
120 King Street West, P.O. Box 176  
Hamilton, Ontario L8N 3C3  
Fax: (905) 525-4533

## 0112

Canadian Compensation Association  
10435 Islington Avenue, P.O. Box 294  
Kleinburg, Ontario L0J 1C0  
Fax: (905) 893-2392

Canadian Public Personnel Management Association  
252 Bloor Street West, 11th Floor  
Toronto, Ontario M5S 1V5  
Fax: (416) 325-0308

## 012

Certified General Accountants Association of Canada  
700-1188 West Georgia Street  
Vancouver, British Columbia V6E 4A2  
Fax: (604) 689-5845

Institute of Certified Management Consultants of Canada (ICMCC)  
181 Bay Street, Suite 2R  
Toronto, Ontario M5J 2T3  
Fax: (416) 869-3037

Metropolitan Life Insurance Company  
99 Bank Street  
Ottawa, Ontario K1P 5A3  
Fax: (613) 560-7721

Royal Bank  
Head Office Training Centre  
180 Wellington Street, 12th Floor  
Toronto, Ontario M5J 1J1  
Fax: (416) 974-2359

The Society of Management Accountants of Canada  
120 King Street West, P.O. Box 176  
Hamilton, Ontario L8N 3C3  
Fax: (905) 525-4533

## 021

Canadian Council of Professional Engineers  
401-116 Albert Street  
Ottawa, Ontario K1P 5G3  
Fax: (613) 230-5759

Canadian Council of Technicians and Technologists  
2-285 McLeod Street  
Ottawa, Ontario K2P 1A1  
Fax: (613) 238-8822

Canadian Information Processing Society  
106-430 King Street West  
Toronto, Ontario M5V 1L5  
Fax: (416) 593-5184

DPMA The Association of Information Systems Professionals  
101-605 Des Meurons Street  
Winnipeg, Manitoba R2H 2R1  
Fax: (204) 237-6378

The Royal Architectural Institute of Canada  
330-55 Murray Street  
Ottawa, Ontario K1N 5M3  
Fax: (613) 241-5750

## 031

Canadian Teachers' Federation  
110 Argyle Avenue  
Ottawa, Ontario K2P 1B4  
Fax: (613) 232-1886

## 041

Public Service Commission of Canada  
A1855-300 Laurier Avenue West Tower  
Ottawa, Ontario K1A 0M7  
Fax: (613) 996-5204

## 051

Canadian Association for Health, Physical Education, Recreation and Dance  
160 James Naismith Drive  
Gloucester, Ontario K1B 5N4  
Fax: (613) 748-5737

Canadian Library Association  
602-200 Elgin Street  
Ottawa, Ontario K2P 1L5  
Fax: (613) 563-9895

The Alliance of Canadian Cinema, Television and Radio Artists (ACTRA)  
2239 Yonge Street  
Toronto, Ontario M4S 2B5  
Fax: (416) 489-8076

**061**

Canadian Advertising Foundation  
402-350 Bloor Street East  
Toronto, Ontario M4W 1H4  
Fax: (416) 961-7904

Canadian Professional Sales Association  
310-145 Wellington Street West  
Toronto, Ontario M5J 1H8  
Fax: (416) 408-2684

**062**

Retail Council of Canada  
600-210 Dundas Street West  
Toronto, Ontario M5G 2E8  
Fax: (416) 598-3707

**063**

Canadian Restaurant and Foodservices Association  
316 Bloor Street West  
Toronto, Ontario M5S 1W5  
Fax: (416) 923-1450

Hotel Association of Canada, Inc.  
1016-130 Albert Street  
Ottawa, Ontario K1P 5G4  
Fax: (613) 238-3878

**071**

Canadian Air Traffic Control Association (C.A.T.C.A.)  
162 Cleopatra Drive  
Nepean, Ontario K2C 0C8  
Fax: (613) 225-8448

Canadian Construction Association  
85 Albert Street, 10th Floor  
Ottawa, Ontario K1P 6A4  
Fax: (613) 236-9526

Canadian Home Builders' Association  
200-150 Laurier Avenue West  
Ottawa, Ontario K1P 5J4  
Fax: (613) 232-8214

Canadian Trucking Human Resources Council  
606-90 Sparks Street  
Ottawa, Ontario K1P 5B4  
Fax: (613) 237-1844

**0711**

Canadian Construction Association  
85 Albert Street, 10th Floor  
Ottawa, Ontario K1P 6A4  
Fax: (613) 236-9526

Canadian Home Builders' Association  
200-150 Laurier Avenue West  
Ottawa, Ontario K1P 5J4  
Fax: (613) 232-8214

**072**

Custodial and Maintenance Association  
70 Vanier Drive  
Kitchener, Ontario N2C 1J5  
Fax: (519) 576-1640

**081**

Canadian Institute of Forestry  
606-151 Slater Street  
Ottawa, Ontario K1P 5H3  
Fax: (613) 234-6181

Fisheries Council of Canada  
806-141 Laurier Avenue West  
Ottawa, Ontario K1P 5J3  
Fax: (613) 238-3542

Mining Association of Canada  
1105-350 Sparks Street  
Ottawa, Ontario K1R 7S8  
Fax: (613) 233-8897

**091**

Board of Commissioners of Public Utilities  
of Newfoundland and Labrador  
P.O. Box 21040  
St. John's, Newfoundland A1A 5B2  
Fax: (709) 726-9604

**111**

Canadian Securities Institute  
1550-121 King Street West  
P.O. Box 113  
Toronto, Ontario M5H 3T9  
Fax: (416) 359-0486

Certified General Accountants Association of Canada  
700-1188 West Georgia Street  
Vancouver, British Columbia V6E 4A2  
Fax: (604) 689-5845

Public Service Commission of Canada  
A1855-300 Laurier Avenue West Tower  
Ottawa, Ontario K1A 0M7  
Fax: (613) 996-5204

The Society of Management Accountants of Canada  
120 King Street West, P.O. Box 176  
Hamilton, Ontario L8N 3C3  
Fax: (905) 525-4533

**1111**

Certified General Accountants Association of Canada  
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Vancouver, British Columbia V6E 4A2  
Fax: (604) 689-5845

The Society of Management Accountants of Canada  
120 King Street West, P.O. Box 176  
Hamilton, Ontario L8N 3C3  
Fax: (905) 525-4533

**112**

Canadian Compensation Association  
10435 Islington Avenue, P.O. Box 294  
Kleinburg, Ontario L0J 1C0  
Fax: (905) 893-2392

Canadian Public Personnel Management Association  
252 Bloor Street West, 11th Floor  
Toronto, Ontario M5S 1V5  
Fax: (416) 325-0308

Institute of Certified Management Consultants of Canada (ICMCC)  
181 Bay Street, Suite 2R  
Toronto, Ontario M5J 2T3  
Fax: (416) 869-3037

Public Service Commission of Canada  
A1855-300 Laurier Avenue West Tower  
Ottawa, Ontario K1A 0M7  
Fax: (613) 996-5204

#### **1121**

Canadian Compensation Association  
10435 Islington Avenue, P.O. Box 294  
Kleinburg, Ontario L0J 1C0  
Fax: (905) 893-2392

Canadian Public Personnel Management Association  
252 Bloor Street West, 11th Floor  
Toronto, Ontario M5S 1V5  
Fax: (416) 325-0308

#### **1122**

Institute of Certified Management Consultants of Canada (ICMCC)  
181 Bay Street, Suite 2R  
Toronto, Ontario M5J 2T3  
Fax: (416) 869-3037

#### **121**

Metropolitan Life Insurance Company  
99 Bank Street  
Ottawa, Ontario K1P 5A3  
Fax: (613) 560-7721

#### **122**

Canadian Institute of Certified Administrative Managers  
700-2 Bloor Street West  
Toronto, Ontario M4W 3R1  
Fax: (416) 923-2071

Canadian Compensation Association  
10435 Islington Avenue, P.O. Box 294  
Kleinburg, Ontario L0J 1C0  
Fax: (905) 893-2392

Canadian Public Personnel Management Association  
252 Bloor Street West, 11th Floor  
Toronto, Ontario M5S 1V5  
Fax: (416) 325-0308

Purchasing Management Association of Canada  
1414-2 Carlton Street  
Toronto, Ontario M5B 1J3  
Fax: (416) 977-8886

#### **1221**

Canadian Institute of Certified Administrative Managers  
700-2 Bloor Street West  
Toronto, Ontario M4W 3R1  
Fax: (416) 923-2071

#### **1225**

Purchasing Management Association of Canada  
1414-2 Carlton Street  
Toronto, Ontario M5B 1J3  
Fax: (416) 977-8886

#### **123**

Appraisal Institute of Canada  
1111 Portage Avenue  
Winnipeg, Manitoba R3G 0S8  
Fax: (204) 783-5575

Canadian Independent Adjusters' Association  
1305-55 Queen Street East  
Toronto, Ontario M5C 1R6  
Fax: (416) 362-8251

Certified General Accountants Association of Canada  
700-1188 West Georgia Street  
Vancouver, British Columbia V6E 4A2  
Fax: (604) 689-5845

Metropolitan Life Insurance Company  
99 Bank Street  
Ottawa, Ontario K1P 5A3  
Fax: (613) 560-7721

The Society of Management Accountants of Canada  
120 King Street West, P.O. Box 176  
Hamilton, Ontario L8N 3C3  
Fax: (905) 525-4533

#### **1231**

Certified General Accountants Association of Canada  
700-1188 West Georgia Street  
Vancouver, British Columbia V6E 4A2  
Fax: (604) 689-5845

The Society of Management Accountants of Canada  
120 King Street West, P.O. Box 176  
Hamilton, Ontario L8N 3C3  
Fax: (905) 525-4533

#### **1233**

Canadian Independent Adjusters' Association  
1305-55 Queen Street East  
Toronto, Ontario M5C 1R6  
Fax: (416) 362-8251

Certified General Accountants Association of Canada  
700-1188 West Georgia Street  
Vancouver, British Columbia V6E 4A2  
Fax: (604) 689-5845

#### **124**

Canadian Health Record Association  
501-1090 Don Mills Road  
Don Mills, Ontario M3C 3R6  
Fax: (416) 447-4598

Professional Secretaries International, Canada District  
10502 NW Ambassador Drive  
P.O. Box 20404, Kansas City,  
64195-0404, MO, USA  
Fax: (816) 891-9118

#### **1242**

Professional Secretaries International, Canada District  
10502 NW Ambassador Drive  
P.O. Box 20404, Kansas City,  
64195-0404, Missouri, USA  
Fax: (816) 891-9118

#### **1243**

Canadian Health Record Association  
501-1090 Don Mills Road  
Don Mills, Ontario M3C 3R6  
Fax: (416) 447-4598



**141**

Association of Administrative Assistants  
P.O. Box 5107, Station A  
Toronto, Ontario M5W 1N4  
Fax: (416) 979-4848

Professional Secretaries International, Canada District  
10502 NW Ambassador Drive  
P.O. Box 20404, Kansas City,  
64195-0404, Missouri, USA  
Fax: (816) 891-9118

**142**

DPMA The Association of Information Systems Professionals  
101-605 Des Meurons Street  
Winnipeg, Manitoba R2H 2R1  
Fax: (204) 237-6378

**1421**

DPMA The Association of Information Systems Professionals  
101-605 Des Meurons Street  
Winnipeg, Manitoba R2H 2R1  
Fax: (204) 237-6378

**1422**

DPMA The Association of Information Systems Professionals  
101-605 Des Meurons Street  
Winnipeg, Manitoba R2H 2R1  
Fax: (204) 237-6378

**143**

Canadian Bankers' Association  
Commerce Court West  
30th Floor, P.O. Box 348  
Toronto, Ontario M5L 1G2  
Fax: (416) 362-5658

Metropolitan Life Insurance Company  
99 Bank Street  
Ottawa, Ontario K1P 5A3  
Fax: (613) 560-7721

**1431**

Canadian Bankers' Association  
Commerce Court West  
30th Floor, P.O. Box 348  
Toronto, Ontario M5L 1G2  
Fax: (416) 362-5658

**1433**

Canadian Bankers' Association  
Commerce Court West  
30th Floor, P.O. Box 348  
Toronto, Ontario M5L 1G2  
Fax: (416) 362-5658

**144**

Canadian Compensation Association  
10435 Islington Avenue  
P.O. Box 294  
Kleinburg, Ontario L0J 1C0  
Fax: (905) 893-2392

Canadian Public Personnel Management Association  
252 Bloor Street West, 11th Floor  
Toronto, Ontario M5S 1V5  
Fax: (416) 325-0308

**145**

Canadian Library Association  
602-200 Elgin Street  
Ottawa, Ontario K2P 1L5  
Fax: (613) 563-9895

**146**

Purolator Courier Limited  
500-5995 Avebury Road  
Mississauga, Ontario L5R 3T8  
Fax: (905) 712-6741

**147**

Canadian Professional Logistics Institute  
710-33 Yonge Street  
Toronto, Ontario M5E 1G4  
Fax: (416) 363-5598

**211**

Canadian Society for Chemical Technology  
550-130 Slater Street  
Ottawa, Ontario K1P 6E2  
Fax: (613) 232-5862

Canadian Society for Chemical Engineering  
McGill University  
3480 University Street  
Montreal, Quebec H3A 2A7  
Fax: (514) 398-6678

Canadian Society for Chemistry  
Erindale College, University of Toronto  
Mississauga, Ontario L5L 1C6  
Fax: (416) 978-8775

Geological Association of Canada  
Department of Earth Sciences  
Memorial University of Newfoundland  
St. John's, Newfoundland A1B 3X5  
Fax: (709) 737-2532

**212**

Canadian Federation of Biological Societies  
104-1750 Courtwood Crescent  
Ottawa, Ontario K2C 2B5  
Fax: (613) 225-9621

**213**

Canadian Council of Professional Engineers  
401-116 Albert Street  
Ottawa, Ontario K1P 5G3  
Fax: (613) 230-5759

**2131**

Canadian Council of Professional Engineers  
401-116 Albert Street  
Ottawa, Ontario K1P 5G3  
Fax: (613) 230-5759

**2132**

Canadian Council of Professional Engineers  
401-116 Albert Street  
Ottawa, Ontario K1P 5G3  
Fax: (613) 230-5759

**2133**

Canadian Council of Professional Engineers  
401-116 Albert Street  
Ottawa, Ontario K1P 5G3  
Fax: (613) 230-5759

**214**

Canadian Council of Professional Engineers  
401-116 Albert Street  
Ottawa, Ontario K1P 5G3  
Fax: (613) 230-5759

**215**

The Royal Architectural Institute of Canada  
330-55 Murray Street  
Ottawa, Ontario K1N 5M3  
Fax: (613) 241-5750

Urban Development Institute  
717 West Pender Street, 3rd Floor  
Vancouver, British Columbia V6C 1G9  
Fax: (604) 689-8691

**216**

Canadian Information Processing Society  
106-430 King Street West  
Toronto, Ontario M5V 1L5  
Fax: (416) 593-5184

DPMA The Association of Information Systems Professionals  
101-605 Des Meurons Street  
Winnipeg, Manitoba R2H 2R1  
Fax: (204) 237-6378

**2162**

Canadian Information Processing Society  
106-430 King Street West  
Toronto, Ontario M5V 1L5  
Fax: (416) 593-5184

DPMA The Association of Information Systems Professionals  
101-605 Des Meurons Street  
Winnipeg, Manitoba R2H 2R1  
Fax: (204) 237-6378

**2163**

Canadian Information Processing Society  
106-430 King Street West  
Toronto, Ontario M5V 1L5  
Fax: (416) 593-5184

DPMA The Association of Information Systems Professionals  
101-605 Des Meurons Street  
Winnipeg, Manitoba R2H 2R1  
Fax: (204) 237-6378

**221**

Canadian Council of Technicians and Technologists  
2-285 McLeod Street  
Ottawa, Ontario K2P 1A1  
Fax: (613) 238-8822

Canadian Society for Chemical Technology  
550-130 Slater Street  
Ottawa, Ontario K1P 6E2  
Fax: (613) 232-5862

The Canadian Chemical Producers' Association  
805-350 Sparks Street  
Ottawa, Ontario K1R 7S8  
Fax: (613) 237-4061

**222**

Canadian Council of Technicians and Technologists  
2-285 McLeod Street  
Ottawa, Ontario K2P 1A1  
Fax: (613) 238-8822

Canadian Federation of Biological Societies  
104-1750 Courtwood Crescent  
Ottawa, Ontario K2C 2B5  
Fax: (613) 225-9621

Canadian Institute of Forestry  
606-151 Slater Street  
Ottawa, Ontario K1P 5H3  
Fax: (613) 234-6181

**223**

Canadian Council of Technicians and Technologists  
2-285 McLeod Street  
Ottawa, Ontario K2P 1A1  
Fax: (613) 238-8822

**224**

Canadian Council of Technicians and Technologists  
2-285 McLeod Street  
Ottawa, Ontario K2P 1A1  
Fax: (613) 238-8822

Canadian Electronic and Appliance Service Association  
115-10 Wynford Heights Crescent  
Don Mills, Ontario M3C 1K8  
Fax: (416) 447-2511

International Brotherhood of Electrical Workers  
401-45 Sheppard Avenue East  
Willowdale, Ontario M2N 5Y1  
Fax: (416) 226-1492

**225**

Canadian Council of Technicians and Technologists  
2-285 McLeod Street  
Ottawa, Ontario K2P 1A1  
Fax: (613) 238-8822

The Royal Architectural Institute of Canada  
330-55 Murray Street  
Ottawa, Ontario K1N 5M3  
Fax: (613) 241-5750

**2253**

Canadian Council of Technicians and Technologists  
2-285 McLeod Street  
Ottawa, Ontario K2P 1A1  
Fax: (613) 238-8822

The Royal Architectural Institute of Canada  
330-55 Murray Street  
Ottawa, Ontario K1N 5M3  
Fax: (613) 241-5750

**226**

Association for Canadian Registered Safety Professionals  
6519B Mississauga Road  
Mississauga, Ontario L5N 1A6  
Fax: (416) 567-7191

Canadian Institute of Public Health Inspectors  
201-38 Auriga Drive  
Nepean, Ontario K2E 8A5  
Fax: (613) 224-6055

Human Factors Association of Canada  
6519-B Mississauga Road  
Mississauga, Ontario L5N 1A6  
Fax: (905) 567-7191

Occupational Hygiene Association of Ontario  
6519-B Mississauga Road  
Mississauga, Ontario L5N 1A6  
Fax: (905) 567-7191  
**227**

Canadian Air Line Pilots Association  
1300 Steeles Avenue East  
Brampton, Ontario L6T 1A2  
Fax: (416) 453-8757

Canadian Air Traffic Control Association (C.A.T.C.A.)  
162 Cleopatra Drive  
Nepean, Ontario K2C 0C8  
Fax: (613) 225-8448

Canadian Port and Harbour Association  
8 Parmalee Crescent  
Etobicoke, Ontario M9R 2X7  
Fax: (416) 245-1250

## **2271**

Canadian Air Line Pilots Association  
1300 Steeles Avenue East  
Brampton, Ontario L6T 1A2  
Fax: (416) 453-8757

Canadian Air Traffic Control Association (C.A.T.C.A.)  
162 Cleopatra Drive  
Nepean, Ontario K2C 0C8  
Fax: (613) 225-8448

## **311**

Canadian Dental Association  
1815 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 523-7736

Canadian Medical Association  
1867 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 731-1755

The Canadian Veterinary Medical Association  
339 Booth Street  
Ottawa, Ontario K1R 7K1  
Fax: (613) 236-9681

## **3111**

Canadian Medical Association  
1867 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 731-1755

## **3112**

Canadian Medical Association  
1867 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 731-1755

## **3113**

Canadian Dental Association  
1815 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 523-7736

## **312**

Canadian Chiropractic Association  
1396 Eglinton Avenue West  
Toronto, Ontario M6C 2E4  
Fax: (416) 781-7344

The Canadian Association of Optometrists  
301-1785 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 738-7161

The Canadian Osteopathic Association  
575 Waterloo Street  
London, Ontario N6B 2R2  
Fax: (519) 439-2616

## **313**

Canadian Society of Hospital Pharmacists  
350-1145 Hunt Club Road  
Ottawa, Ontario K1V 0Y3  
Fax: (613) 736-5660

Canadian Society of Industrial Pharmacists  
1785 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 523-0445

The Canadian Dietetic Association  
601-480 University Avenue  
Toronto, Ontario M5G 1V2  
Fax: (416) 596-0603

## **3131**

Canadian Society of Hospital Pharmacists  
350-1145 Hunt Club Road  
Ottawa, Ontario K1V 0Y3  
Fax: (613) 736-5660

Canadian Society of Industrial Pharmacists  
1785 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 523-0445

## **314**

Canadian Association of Occupational Therapists  
3400-1125 Colonel By Drive  
Ottawa, Ontario K1S 5R1  
Fax: (613) 523-2552

Canadian Association of Speech-Language Pathologists and Audiologists  
2006-130 Albert Street  
Ottawa, Ontario K1P 5G4  
Fax: (613) 567-2859

Canadian Physiotherapy Association  
430-1730 St. Laurent Boulevard  
Ottawa, Ontario K1G 5L1  
Fax: (613) 738-1244

Human Factors Association of Canada  
6519-B Mississauga Road  
Mississauga, Ontario L5N 1A6  
Fax: (905) 567-7191

Occupational Hygiene Association of Ontario  
6519-B Mississauga Road  
Mississauga, Ontario L5N 1A6  
Fax: (905) 567-7191

**3142**

Canadian Physiotherapy Association  
430-1730 St. Laurent Boulevard  
Ottawa, Ontario K1G 5L1  
Fax: (613) 738-1244

**3143**

Canadian Association of Occupational Therapists  
3400-1125 Colonel By Drive  
Ottawa, Ontario K1S 5R1  
Fax: (613) 523-2552

**315**

Canadian Nurses Association  
50 Driveway  
Ottawa, Ontario K2P 1E2  
Fax: (613) 237-3520

**321**

Canadian Association of Medical Radiation Technologists  
601-294 Albert Street  
Ottawa, Ontario K1P 6E6  
Fax: (613) 234-1097

Canadian Society of Laboratory Technologists  
P.O. Box 2830, Station LCD 1  
Hamilton, Ontario L8N 3N8  
Fax: (905) 528-4968

The Canadian Society of Respiratory Therapists  
102-1785 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 521-4314

**3211**

Canadian Society of Laboratory Technologists  
P.O. Box 2830, Station LCD 1  
Hamilton, Ontario L8N 3N8  
Fax: (905) 528-4968

**3212**

Canadian Society of Laboratory Technologists  
P.O. Box 2830, Station LCD 1  
Hamilton, Ontario L8N 3N8  
Fax: (905) 528-4968

**3215**

Canadian Association of Medical Radiation Technologists  
601-294 Albert Street  
Ottawa, Ontario K1P 6E6  
Fax: (613) 234-1097

**322**

Canadian Dental Assistants Association  
105-1785 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 521-5572

Canadian Dental Association  
1815 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 523-7736

Denturist Association of Canada  
P.O. Box 46114 RPO Westdale  
Winnipeg, Manitoba R3R 3S3  
Fax: (204) 895-9595

**3222**

Canadian Dental Association  
1815 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 523-7736

Denturist Association of Canada  
P.O. Box 46114 RPO Westdale  
Winnipeg, Manitoba R3R 3S3  
Fax: (204) 895-9595

**323**

Opticians Association of Canada  
214-160 Hargrove Street  
Winnipeg, Manitoba R3C 3H3  
Fax: (204) 947-2519

Canadian Nurses Association  
50 Driveway  
Ottawa, Ontario K2P 1E2  
Fax: (613) 237-3520

**3233**

Canadian Nurses Association  
50 Driveway  
Ottawa, Ontario K2P 1E2  
Fax: (613) 237-3520

**341**

Canadian Dental Assistants Association  
105-1785 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 521-5572

Canadian Nurses Association  
50 Driveway  
Ottawa, Ontario K2P 1E2  
Fax: (613) 237-3520

**411**

Canadian Bar Association  
902-50 O'Connor Street  
Ottawa, Ontario K1P 6L2  
Fax: (613) 237-0185

Corporation de service des notaires du Québec  
630 René Lévesque Blvd West, Suite 1660  
Montreal, Quebec H3B 1S6  
Fax: (514) 879-1093

**412**

Association of Administrative Assistants  
P.O. Box 5107, Station A  
Toronto, Ontario M5W 1N4  
Fax: (416) 979-4848

Association des professeurs de français des universités  
et collèges canadiens  
Département d'études françaises et hispaniques  
Memorial University of Newfoundland  
St. John's, Newfoundland A1B 3X9  
Fax: (709) 737-4000

Canadian Association of University Teachers  
2675 Queensview Drive  
Ottawa, Ontario K2B 8K2  
Fax: (613) 820-7244



**413**

Fédération des cégeps  
500 Crémazie Blvd East  
Montréal, Quebec H2P 1E7  
Fax: (514) 381-2263

National Association of Career Colleges  
1-301 Fairview Drive  
P.O. Box 340  
Brantford, Ontario N3T 5N3  
Fax: (519) 753-4712

**414**

Canadian Guidance and Counselling Association  
600 Laurier Avenue West  
Ottawa, Ontario K1P 5Z9  
Fax: (613) 230-5884

Canadian Teachers' Federation  
110 Argyle Avenue  
Ottawa, Ontario K2P 1B4  
Fax: (613) 232-1886

**4141**

Canadian Teachers' Federation  
110 Argyle Avenue  
Ottawa, Ontario K2P 1B4  
Fax: (613) 232-1886

**4142**

Canadian Teachers' Federation  
110 Argyle Avenue  
Ottawa, Ontario K2P 1B4  
Fax: (613) 232-1886

**4143**

Canadian Guidance and Counselling Association  
600 Laurier Avenue West  
Ottawa, Ontario K1P 5Z9  
Fax: (613) 230-5884

Canadian Teachers' Federation  
110 Argyle Avenue  
Ottawa, Ontario K2P 1B4  
Fax: (613) 232-1886

**415**

Canadian Association of Social Workers  
402-383 Parkdale Avenue  
Ottawa, Ontario K1Y 4R4  
Fax: (613) 729-9608

Canadian Psychological Association  
205-151 Slater Street  
Ottawa, Ontario K1P 5H3  
Fax: (613) 237-1674

**4151**

Canadian Psychological Association  
205-151 Slater Street  
Ottawa, Ontario K1P 5H3  
Fax: (613) 237-1674

**4152**

Canadian Association of Social Workers  
402-383 Parkdale Avenue  
Ottawa, Ontario K1Y 4R4  
Fax: (613) 729-9608

**416**

Federation of Engineering and Scientific Associations  
206-3199 Bathurst Street  
Toronto, Ontario M6A 2B2  
Fax: (416) 784-1366

**4166**

Federation of Engineering and Scientific Associations  
206-3199 Bathurst Street  
Toronto, Ontario M6A 2B2  
Fax: (416) 784-1366

**421**

Canadian Association of Social Workers  
402-383 Parkdale Avenue  
Ottawa, Ontario K1Y 4R4  
Fax: (613) 729-9608

Canadian Teachers' Federation  
110 Argyle Avenue  
Ottawa, Ontario K2P 1B4  
Fax: (613) 232-1886

Easter Seals March of Dimes National Council  
801-45 Sheppard Avenue East  
Toronto, Ontario M2N 5W9  
Fax: (416) 229-1371

Smithers Community Services Association  
1338 Main Street  
P.O. Box 2684  
Smithers, British Columbia V0J 2N0  
Fax: (604) 847-3712

**4212**

Canadian Association of Social Workers  
402-383 Parkdale Avenue  
Ottawa, Ontario K1Y 4R4  
Fax: (613) 729-9608

Smithers Community Services Association  
1338 Main Street, P.O. Box 2684  
Smithers, British Columbia V0J 2N0  
Fax: (604) 847-3712

**4215**

Easter Seals March of Dime National Council  
801-45 Sheppard Avenue East  
Toronto, Ontario M2N 5W9  
Fax: (416) 229-1371

Canadian Teachers' Federation  
110 Argyle Avenue  
Ottawa, Ontario K2P 1B4  
Fax: (613) 232-1886

**511**

Canadian Library Association  
602-200 Elgin Street  
Ottawa, Ontario K2P 1L5  
Fax: (613) 563-9895

**512**

Canadian Public Relations Society, Inc.  
720-220 Laurier Avenue West  
Ottawa, Ontario K1P 5Z9  
Fax: (613) 232-0565

Canadian Translators and Interpreters Council  
1402-1 Nicholas Street  
Ottawa, Ontario K1N 7B7  
Fax: (613) 241-4098

#### 5121

Canadian Public Relations Society, Inc.  
720-220 Laurier Avenue West  
Ottawa, Ontario K1P 5Z9  
Fax: (613) 232-0565

Canadian Translators and Interpreters Council  
1402-1 Nicholas Street  
Ottawa, Ontario K1N 7B7  
Fax: (613) 241-4098

#### 5122

Canadian Public Relations Society, Inc.  
720-220 Laurier Avenue West  
Ottawa, Ontario K1P 5Z9  
Fax: (613) 232-0565

Canadian Translators and Interpreters Council  
1402-1 Nicholas Street  
Ottawa, Ontario K1N 7B7  
Fax: (613) 241-4098

#### 5124

Canadian Public Relations Society, Inc.  
720-220 Laurier Avenue West  
Ottawa, Ontario K1P 5Z9  
Fax: (613) 232-0565

#### 513

The Alliance of Canadian Cinema, Television and Radio Artists (ACTRA)  
2239 Yonge Street  
Toronto, Ontario M4S 2B5  
Fax: (416) 489-8076

#### 521

Canadian Library Association  
602-200 Elgin Street  
Ottawa, Ontario K2P 1L5  
Fax: (613) 563-9895

#### 522

Canadian Association of Photographers and Illustrators  
in Communications  
322-100 Broadview Avenue  
Toronto, Ontario M4M 2E8  
Fax: (416) 462-3678

Communications, Energy and Paperworkers Union of Canada  
1900-350 Albert Street  
Ottawa, Ontario K1R 1A4  
Fax: (613) 230-5801

#### 523

Communications, Energy and Paperworkers Union of Canada  
1900-350 Albert Street  
Ottawa, Ontario K1R 1A4  
Fax: (613) 230-5801

The Alliance of Canadian Cinema, Television and Radio Artists (ACTRA)  
2239 Yonge Street  
Toronto, Ontario M4S 2B5  
Fax: (416) 489-8076

#### 524

Canadian Association of Photographers and Illustrators  
in Communications  
322-100 Broadview Avenue  
Toronto, Ontario M4M 2E8  
Fax: (416) 462-3678

Interior Designers of Canada  
414-260 King Street East  
Toronto, Ontario M5A 1K3  
Fax: (416) 594-9313

#### 5241

Canadian Association of Photographers and Illustrators in  
Communications  
322-100 Broadview Avenue  
Toronto, Ontario M4M 2E8  
Fax: (416) 462-3678

#### 623

Metropolitan Life Insurance Company  
99 Bank Street  
Ottawa, Ontario K1P 5A3  
Fax: (613) 560-7721

Purchasing Management Association of Canada  
1414-2 Carlton Street  
Toronto, Ontario M5B 1J3  
Fax: (416) 977-8886

#### 6231

Metropolitan Life Insurance Company  
99 Bank Street  
Ottawa, Ontario K1P 5A3  
Fax: (613) 560-7721

Purchasing Management Association of Canada  
1414-2 Carlton Street  
Toronto, Ontario M5B 1J3  
Fax: (416) 977-8886

#### 6233

Purchasing Management Association of Canada  
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Toronto, Ontario M5B 1J3  
Fax: (416) 977-8886

#### 624

Canadian Federation of Chefs and Cooks  
202-738A Bank Street  
Ottawa, Ontario K1S 3V4  
Fax: (613) 563-2317

Canadian Restaurant and Foodservices Association  
316 Bloor Street West  
Toronto, Ontario M5S 1W5  
Fax: (416) 923-1450

#### 625

Bakery Council of Canada  
301-885 Don Mills Road  
Don Mills, Ontario M3C 1V9  
Fax: (416) 510-8043

#### 626

Canadian Association of Fire Fighters  
11J Rayborn Crescent  
St. Albert, Alberta T8N 5C3  
Fax: (403) 458-2503

Canadian Police Association  
100-141 Catherine Street  
Ottawa, Ontario K2P 1C3  
Fax: (613) 231-3254

**642**

Retail Council of Canada  
600-210 Dundas Street West  
Toronto, Ontario M5G 2E8  
Fax: (416) 598-3707

**643**

Canadian Institute of Travel Counsellors  
209-55 Eglinton Avenue East  
Toronto, Ontario M4P 1G8  
Fax: (416) 484-4140

Tourism Industry Association of Canada  
1016-130 Albert Street  
Ottawa, Ontario K1P 5G4  
Fax: (613) 238-3878

**6431**

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Canadian Restaurant and Foodservices Association  
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**647**

British Columbia Teachers' Federation  
100-550 West 6th Avenue  
Vancouver, British Columbia V5Z 4P2  
Fax: (604) 871-2291

Canadian Teachers' Federation  
110 Argyle Avenue  
Ottawa, Ontario K2P 1B4  
Fax: (613) 232-1886

Saskatchewan Early Childhood Education Council  
2317 Arlington Avenue  
Saskatoon, Saskatchewan S7J 2H8  
Fax: (306) 374-1122

**6470**

British Columbia Teachers' Federation  
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Vancouver, British Columbia V5Z 4P2  
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Saskatchewan Early Childhood Education Council  
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Saskatoon, Saskatchewan S7J 2H8  
Fax: (306) 374-1122

**661**

Royal Bank  
Head Office Training Centre  
180 Wellington Street, 12th Floor  
Toronto, Ontario M5J 1J1  
Fax: (416) 974-2359

**663**

Canadian Medical Association  
1867 Alta Vista Drive  
Ottawa, Ontario K1G 3Y6  
Fax: (613) 731-1755

**665**

Canadian Corps of Commissionaires  
503-100 Gloucester Street  
Ottawa, Ontario K1E 2R7  
Fax: (613) 563-8508

**724**

International Brotherhood of Electrical Workers  
401-45 Sheppard Avenue East  
Willowdale, Ontario M2N 5Y1  
Fax: (416) 226-1492

**7241**

International Brotherhood of Electrical Workers  
401-45 Sheppard Avenue East  
Willowdale, Ontario M2N 5Y1  
Fax: (416) 226-1492

**7242**

International Brotherhood of Electrical Workers  
401-45 Sheppard Avenue East  
Willowdale, Ontario M2N 5Y1  
Fax: (416) 226-1492

**725**

The Canadian Institute of Plumbing and Heating  
330-295 The West Mall  
Etobicoke, Ontario M9C 4Z4  
Fax: (416) 695-0450

**726**

Canadian Council of Sheet Metal Workers  
6188 Kingsway  
Burnaby, British Columbia V5J 1H5  
Fax: (604) 431-1864

**7261**

Canadian Council of Sheet Metal Workers  
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Burnaby, British Columbia V5J 1H5  
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**727**

United Brotherhood of Carpenters and Joiners of America,  
National Research Office  
5799 Yonge Street  
Toronto, Ontario M2M 3V3  
Fax: (416) 225-5390

**7271**

United Brotherhood of Carpenters and Joiners of America,  
National Research Office  
5799 Yonge Street  
Toronto, Ontario M2M 3V3  
Fax: (416) 225-5390

**7272**

United Brotherhood of Carpenters and Joiners of America,  
National Research Office  
5799 Yonge Street  
Toronto, Ontario M2M 3V3  
Fax: (416) 225-5390

**728**

Canadian Masonry Contractors' Association  
360 Superior Boulevard  
Mississauga, Ontario L5T 2N7  
Fax: (905) 795-0475

International Union of Bricklayers and Allied Craftsmen  
3 Forwell Road  
Kitchener, Ontario N2B 1W3  
Fax: (519) 576-7382

Operative Plasterers' and Cement Masons' International Association  
of the US & Canada  
1413 Hayes Street  
Orléans, Ontario K1E 3M8  
Fax: (613) 837-7156

**729**

Canadian Roofing Contractors' Association  
1300-155 Queen Street  
Ottawa, Ontario K1P 6L1  
Fax: (613) 232-2893

**732**

Automotive Industries Association of Canada  
1272 Wellington Street  
Ottawa, Ontario K1Y 3A7  
Fax: (613) 728-6021

Canadian Automotive Repair and Service Council  
230-440 Laurier Avenue West  
Ottawa, Ontario K1R 7X6  
Fax: (613) 782-2362

**7321**

Automotive Industries Association of Canada  
1272 Wellington Street  
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Canadian Automotive Repair and Service Council  
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**734**

Fédération des syndicats du textile et du vêtement (C.S.D.) inc.  
1259 Berri Street, Suite 300  
Montréal, Québec H2L 4C7  
Fax: (514) 842-6385

Furriers Guild of Canada  
300-461 King Street West  
Toronto, Ontario M5V 1K4  
Fax: (416) 593-1546

Textiles Human Resources Council  
1720-66 Slater Street  
Ottawa, Ontario K1P 5H1  
Fax: (613) 230-1270

The Union of Needle Trades, Industrial Textiles  
700-15 Gervais Drive  
Don Mills, Ontario M3C 1Y8  
Fax: (416) 441-9800

**735**

Canadian Society for Industrial Engineering  
3300 Commerce Court West  
P.O. Box 31, Station Commerce Court  
Toronto, Ontario M5L 1B2  
Fax: (416) 777-8818

**741**

Canadian Bus Association  
201-610 Arden Road  
Markham, Ontario L3R 9Z1  
Fax: (613) 513-0624

**7411**

Canadian Bus Association  
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Markham, Ontario L3R 9Z1  
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**7412**

Canadian Bus Association  
201-610 Arden Road  
Markham, Ontario L3R 9Z1  
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**822**

Communications, Energy and Paperworkers Union of Canada  
1900-350 Albert Street  
Ottawa, Ontario K1R 1A4  
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Western Employers Labour Relations Association  
507-4190 Lougheed Highway  
Burnaby, British Columbia V5C 6A8  
Fax: (604) 291-0538

**823**

Communications, Energy and Paperworkers Union of Canada  
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**825**

Canadian Federation of Agriculture  
1101-75 Albert Street  
Ottawa, Ontario K1P 5E7  
Fax: (613) 236-5749

**826**

Fisheries Council of Canada  
806-141 Laurier Avenue West  
Ottawa, Ontario K1P 5J3  
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**841**

Western Employers Labour Relations Association  
507-4190 Lougheed Highway  
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**842**

Canadian Institute of Forestry  
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**843**

Canadian Federation of Agriculture  
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Western Employers Labour Relations Association  
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Burnaby, British Columbia V5C 6A8  
Fax: (604) 291-0538

**942**

Canadian Plastics Institute  
48-1262 Don Mills Road  
Don Mills, Ontario M3B 2W7  
Fax: (416) 441-1208

Communications, Energy and Paperworkers Union of Canada  
1900-350 Albert Street  
Ottawa, Ontario K1R 1A4  
Fax: (613) 230-5801

The Canadian Chemical Producers' Association  
805-350 Sparks Street  
Ottawa, Ontario K1R 7S8  
Fax: (613) 237-4061

The Rubber Association of Canada  
308-89 Queensway West  
Mississauga, Ontario L5B 2V2  
Fax: (905) 270-2640

**943**

Communications, Energy and Paperworkers Union of Canada  
1900-350 Albert Street  
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Fédération des syndicats du textile et du vêtement (C.S.D.) inc.  
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Textiles Human Resources Council  
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**948**

Aerospace Industries Association of Canada  
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Ottawa, Ontario K1P 5Y7  
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Canadian Automotive Repair and Service Council  
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Ottawa, Ontario K1R 7X6  
Fax: (613) 782-2362

Canadian Electronic and Appliance Service Association  
115-10 Wynford Heights Crescent  
Don Mills, Ontario M3C 1K8  
Fax: (416) 447-2511

**9482**

Canadian Automotive Repair and Service Council  
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**9483**

Aerospace Industries Association of Canada  
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**9514**

Western Employers Labour Relations Association  
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**961**

Board of Commissioners of Public Utilities  
of Newfoundland and Labrador  
P.O. Box 21040  
St. John's, Newfoundland A1A 5B2  
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Communications, Energy and Paperworkers Union of Canada  
1900-350 Albert Street  
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3131	Pharmacists	512	Writing, Translating and Public Relations Professionals
314	Therapy and Assessment Professionals	5121	Writers
3142	Physiotherapists	5122	Editors
3143	Occupational Therapists	5124	Professional Occupations in Public Relations and Communications
315	Nurse Supervisors and Registered Nurses	513	Creative and Performing Artists
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3211	Medical Laboratory Technologists and Pathologists' Assistants	522	Photographers, Graphic Arts Technicians & Technical Occupations in Motion Pictures, Broadcasting and the Performing Arts
3212	Medical Laboratory Technicians	523	Announcers and Other Performers
3215	Medical Radiation Technologists	524	Creative Designers and Craftspersons
322	Technical Occupations in Dental Health Care	5241	Graphic Designers and Illustrating Artists
3222	Dental Hygienists and Dental Therapists	525	Athletes, Coaches, Referees and Related Occupations
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3233	Registered Nursing Assistants		
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		622	Technical Sales Specialists, Wholesale Trade
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412	University Professors and Assistants		
413	College and Other Vocational Instructors	6231	Insurance Agents and Brokers
414	Secondary and Elementary School Teachers and Counsellors	6232	Real Estate Agents and Salespersons
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		666	Cleaners
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722	Supervisors, Railway and Motor Transportation Occupations	821	Supervisors, Logging and Forestry
723	Machinists and Related Occupations	822	Supervisors, Mining, Oil and Gas
7231	Machinists and Machinery and Tooling Inspectors	823	Underground Miners, Oil and Gas Drillers and Related Workers
7232	Tool and Die Makers	824	Logging Machinery Operators
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7261	Sheet Metal Workers	844	Other Fishing and Trapping Occupations
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7271	Carpenters		
7272	Cabinetmakers	921	Supervisors, Processing Occupations
728	Masonry and Plastering Trades	922	Supervisors, Assembly and Fabrication
729	Other Construction Trades	923	Central Control and Process Operators in Manufacturing and Processing
731	Machinery and Transportation Equipment Mechanics (Except Motor Vehicle)	941	Machine Operators and Related Workers in Metal and Mineral Products Processing
7311	Construction Millwrights and Industrial Mechanics (Except Textile)	942	Machine Operators and Related Workers in Chemical, Plastic and Rubber Processing
7312	Heavy-Duty Equipment Mechanic	943	Machine Operators and Related Workers in Pulp and Paper Production and Wood Processing
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743	Other Transport Equipment Operators and Related Workers		
744	Other Installers, Repairers and Servicers		
745	Longshore Workers and Material Handlers		
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# Job Futures

## CANADA'S GUIDE TO TOMORROW'S JOBS

### VOLUME ONE: OCCUPATIONAL OUTLOOKS

**E**asy-to-use, comprehensive information on current labour market conditions for 211 occupational groups and how those conditions may change over the next five years.

- types of employers
- job duties
- earnings
- employment requirements
- types of employment
- job prospects... and much more

For a complete picture of the world of work, refer to Volume Two: *Career Outlooks for Graduates*.

*Job Futures* is for

- counsellors   ■ teachers
- parents   ■ students
- workers   ■ job seekers

*Job Futures* describes the world of work—employment facts and trends in today's labour market.

*Job Futures* looks ahead to the year 2000—how labour market conditions and job prospects will change over the next five years.

*Job Futures* offers

- accurate information
- thoughtful analysis
- solid projections

*Job Futures*—A Reference Tool for All Canadians

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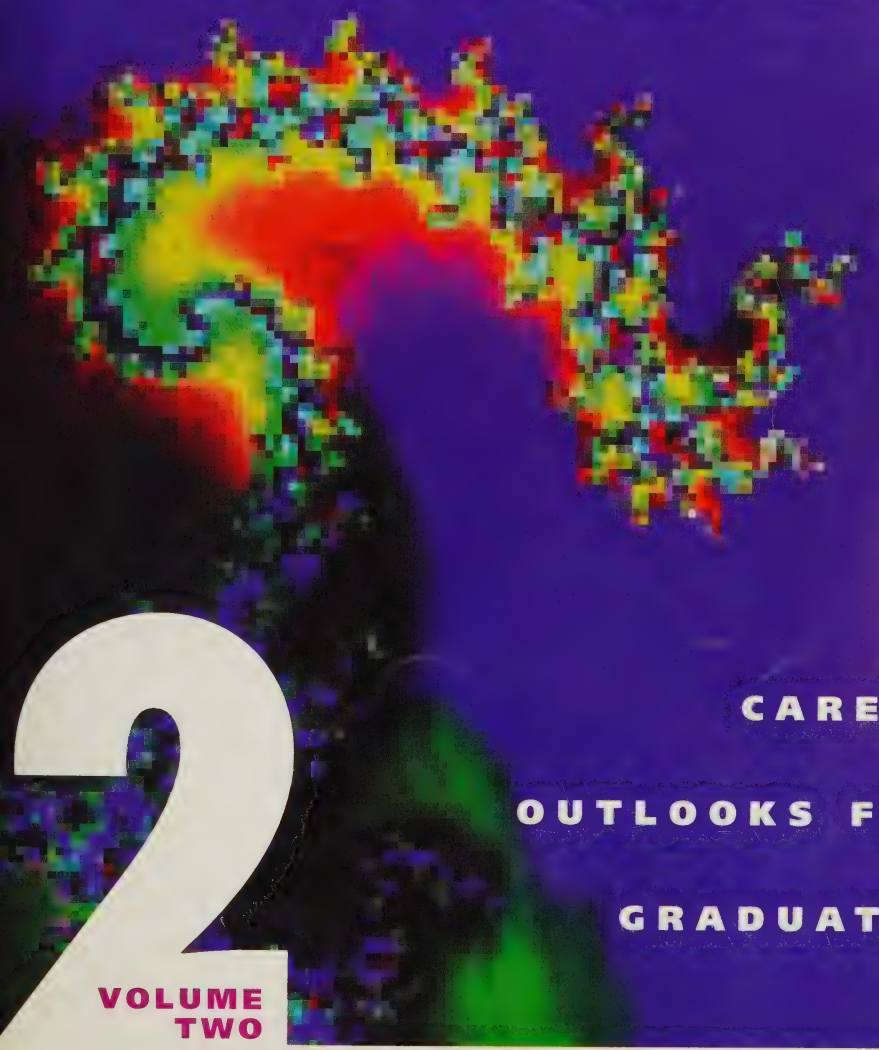
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# Job Futures



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**VOLUME  
TWO**

**CAREER  
OUTLOOKS FOR  
GRADUATES**

**1996 EDITION**



# Job Futures

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Career Outlooks  
for Graduates

VOLUME TWO





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Minister  
of Human Resources  
Development



Ministre  
du Développement  
des ressources humaines

Ottawa, Canada K1A 0J9

**MESSAGE FROM THE MINISTER OF HUMAN RESOURCES DEVELOPMENT CANADA**

I am very pleased to present the fourth edition of Human Resources Development Canada's *Job Futures* - Canada's guide to tomorrow's jobs.

*Job Futures* was first launched in 1986 to provide counsellors with occupational information they could use to give better advice to Canadians on career choices, labour market changes and future employment trends. Over the past ten years, the job market has evolved, so has *Job Futures*. During this time it has become a valuable resource for parents, students, teachers, counsellors, and workers.

The 1996 two-volume edition has been modified to better reflect how labour market conditions and job prospects will change over the next five years. As well, it will provide useful and concise information on post-secondary programs of study and job prospects for new graduates today and to the year 2000.

As Minister of Human Resources Development I believe that better access to up-to-date information about career prospects is critical to fostering a healthy and growing job market. This is why Human Resources Development Canada will continue to provide Canadians with information about current and future labour market conditions through more frequent updates of *Job Futures*. To ensure that as many Canadians as possible are able to use *Job Futures*, it is now available in three formats - book, CD-ROM and on the Internet.

I am confident that with the improvements to the latest edition, *Job Futures* will be an even more valuable and practical reference tool in helping Canadians make informed career choices.

A stylized, handwritten signature in dark ink, appearing to read 'Douglas Young'.

Douglas Young

Canada

# Preface to the Fourth Edition

**Job Futures** is a two-volume publication that provides Canadians with information about the current world of work and projections for the future. It is published by the Canadian Occupational Projection System (COPS) of the Applied Research Branch and the Occupational and Career Development Division of Human Resources Development Canada (HRDC).

**Volume One: Occupational Outlooks** provides general information on 211 occupational groups covering all the jobs in Canada. It also includes specific information on current labour market conditions and projections of how these conditions may change over the next five years.

**Volume Two: Career Outlooks for Graduates** provides information on the work experience of recent postsecondary graduates of 155 programs of study. It also provides projections of job prospects in the next five years for graduates in these study areas.

These estimates and projections for the occupational labour market are the result of a team of HRDC specialists working with sophisticated forecasting tools as well as information provided by professional associations in the private sector.

No one can foresee the future. Continuing globalization, technological developments and political, social and economic change make accurate forecasting difficult. The estimates and projections in **Job Futures** are the best that HRDC specialists could achieve in a rapidly changing labour market. Plans are to update these projections on a regular basis so as to incorporate most recent developments. Please use these volumes with caution.

This fourth edition of **Job Futures** is also available in electronic format.

General enquiries or comments regarding **Job Futures** should be addressed to:

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Occupational Projections and Macroeconomic Studies  
Applied Research Branch, Strategic Policy  
140 Promenade du Portage  
Phase IV, 4th Floor  
Hull, Quebec  
K1A 0J9

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# Introduction to Volume Two

## What's Inside

---

Volume Two provides general information on the education and work experiences of recent graduates from trade and vocational schools, community colleges and universities. This information is organized by programs of study, for example, Biology and Computer Science.

Volume Two includes 155 programs of study, which represent a specific field of study at a certain educational level. For example, **Job Futures** includes four programs of study for Computer Science — one for each of the four educational levels included in Volume Two. Overall, the 155 specific programs of study are based on around 100 general fields of study and account for about 90% of all postsecondary graduates in Canada.

Information on each program of study includes:

- content of the program;
- availability in Canada;
- prerequisites;
- major occupations in which recent graduates found work;
- how these graduates feel about their educational choices and their jobs;
- early labour market experiences of these graduates;
- current labour market prospects for these graduates; and
- job prospects for graduates over the next five years.

This information applies to the program of study *only*, not to specialized areas within the program of study. Generally, study areas that have been grouped together share similar characteristics. It is possible, however, that graduates from a specialized area within a program of study may experience *different* labour market conditions than graduates from other areas in the same program, or perhaps they have responded or will respond differently to the *same* conditions. Where possible, such situations are described in the text.

The classification of programs of study in Volume Two is based on Statistic Canada's information systems although the coding structure is from Human Resources Development Canada's (HRDC's) Canadian Occupational Projection System (COPS) of the Applied Research Branch. Please note the number that appears in the **See also** section at the end of each program of study. For more information on the Field of Study Classification, please read **About the Field of Study Classification (FOSC)** in this Introduction.

## Who Will Find Volume Two Useful?

All Canadians who are interested in education and its relation to current and future labour markets will find Volume Two useful. This includes:

- *school counsellors* providing advice to young people still in school;
- *career counsellors* helping young graduates and adults make career choices;
- *workers* thinking about upgrading their skills or making career changes;
- *high school students* making educational and career decisions;
- *postsecondary students* who want to know more about work prospects in their field; and
- *parents* wishing to help their children plan for the future.

Volume Two of **Job Futures** can help users with educational and career planning since it provides information on the economic conditions that face graduates when they enter the world of work. *Individual* preferences, aptitudes, skills, education and training also play an important role in educational and career planning. For example:



- An adult starting full-time studies may find a program of study particularly attractive because it leads to occupations that better match his or her personal working style.
- An individual may have special skills or talents that will enable him or her to do much better than the average person in a specific program of study where those skills are essential.
- Training and educational institutions vary in quality. Since the labour market distinguishes between graduates from different institutions, students planning their educational paths should realize that it may be easier to obtain work in desired occupations if they have acquired skills in institutions given higher ratings by employers.

## More About the Text

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### Program of Study

This section provides general information about the program of study. It is divided in three main parts:

- An opening statement describes the main types of knowledge acquired from this program of study.
- Facts presented in bullet form identify which provinces in Canada offer the program, its duration, whether or not it is available in a co-op format, and how students in this program may combine the program with other programs of study.
- A final statement outlines the prerequisites for this program of study.

### After Graduation

This section describes the work experiences of recent graduates from the program of study. It has two parts: an opening paragraph and facts presented in bullet form.

The opening paragraph states the number of persons graduating from this program of study in 1994. It also provides information on which jobs these graduates are most likely to get and which industrial sectors are most likely to provide them with opportunities for employment. This information reflects only the *most probable* outcome that can result from a person's choice of this particular program. Other outcomes are also possible depending on the strength of the job market after graduation and the creativity used in hunting for a job.

The facts presented in bullet form provide information on the early labour market experiences of graduates from this program of study. Topics include part-time employment, unemployment, earnings distribution and gender mix. As well, this program of study is compared to all others at the same level of education, i.e., trades-vocational, community college or university level.

This section also provides information on graduates from *other* programs of study who usually find work in the same occupations as the graduates from this program of study. In many instances, graduates from related programs compete with graduates from this program for the available jobs. However, in other instances, these graduates perform complementary tasks within the same occupational grouping and are not competitors.

The final bullet statement presents information on job changing — the number of graduates from this program of study who have changed jobs between the third and fifth year after graduation, and the kinds of occupations involved in these job changes. This information is significant for two reasons. First, it provides students already in this program of study, or those considering the program, with a preview of the amount of job turnover they may expect as newcomers to the labour market. Second, it gives some indication of job mobility and advancement opportunities for graduates from this program of study.

### Work Prospects

This section provides an assessment of current and future labour market conditions for graduates from this program of study. It is divided into two parts:

- A statement about *current* labour market conditions is followed by more detailed information.
- A statement about how these conditions may change in the *future* is followed by more detailed information.

Information on the current labour market describes the conditions that recent graduates from this program of study face as newcomers to the job market. Conditions are described as *poor*, *fair* or *good*.<sup>1</sup> This is followed by information on unemployment, earnings and how well graduates' education and training match the tasks they perform at work.

Projections on the future labour market are based on current labour market conditions, i.e., *poor*, *fair* or *good*, and forecasts regarding future employer requirements and the number of people expected to be seeking jobs in specific occupational groups. These occupational groups are those in which graduates from this program of study usually seek work. As well, these projections take into account the speed at which current conditions are expected to change.<sup>2</sup>

A general statement describes future labour market conditions and expected changes from 1995 to 2000. Conditions are described as follows:

- If labour market conditions for these graduates are expected to get better (get worse), the statement reads, "Over the next five years, the labour market situation for these graduates is expected to improve (worsen)."
- If this change is expected to be great enough to change the overall rating of conditions for this program of study, the new rating is also given. For example, if labour market conditions are fairly good, but will worsen drastically, the statement reads, "Over the next five years, the labour market situation for these graduates is expected to worsen from fairly good to poor."
- If labour market conditions are projected to be stable, the statement notes that conditions will remain at the current level. For example, for a program of study where the current situation is good and is expected to be stable, the statement reads, "Over the next five years, the labour market situation for these graduates is expected to remain good."

The paragraphs presented in bullet form provide more specific information on the future labour prospects of graduates from this program of study, including the industrial sectors and occupations in which these graduates are most likely to find work.

## See Also

Volume Two may be a starting point for readers who are interested in more information on a particular program of study. This section indicates ways to find that related information.

The first line provides a cross-reference to the Field of Study Classification (FOSC) used in **Job Futures**. It identifies the FOSC code which provides information on the *level of education* and the *major* and *specific areas of study*. For example, in the code U72, the "U" stands for undergraduate university, the "7" stands for Physical Sciences and the "2" for Computer Science.

The related codes refer to the codes of programs of study that are *similar*, in terms of learning, to the program of study of the main code. These related codes usually correspond to programs that are in the *same* field of study, but refer to *other* levels of education. For example, the program of study U72, Computer Science at the undergraduate university level, has the following related codes:

- M72, Computer Science at the university master's level;
- C71, Computer Science at the community college level; and
- T71, Computer Science at the trade-vocational level.

For more information on these codes, read **About the Field of Study Classification (FOSC)** in this Introduction.

The second line provides a cross-reference to Volume One: Occupational Outlooks. These numbers are codes that refer to those occupational groups described in Volume One in which graduates from this program of study are most likely to find work. The codes are from the National Occupational Classification (NOC).<sup>3</sup>

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1 For more information on what these terms mean, please consult the section, **About this Occupation (these Occupations)**, in the Introduction to Volume One.

2 For more information about these types of projections, please consult the section, **Looking to the Year 2000**, in the Introduction to Volume One.

3 For more information on the NOC, please consult the section, **About the National Occupational Classification (NOC)**, in the Introduction to Volume One.

# More About the Charts

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The charts in Volume Two present data of interest to the reader in a graphic format.

## Full-Time Earnings

This bar-style graphic provides information on the 1992 wage and salaries for full-time and full-year workers who graduated from this program of study in 1990.

- The *highest number* is the average of the earnings of the top 10% of earners.
- The *average number* represents average earnings of all earners.
- The *lowest number* is the average of the earnings of the lowest 10% of earners.

The term *full-time earnings* does not include other forms of compensation such as retirement benefits, stock options or expense accounts.

HRDC/Statistics Canada's National Graduates' Survey of 1990 graduates was the source for information on earnings. The distribution of earnings by program of study is based on survey results that may not reflect fully the true distribution of earnings for some programs of study included in **Job Futures**.

## Occupations of Graduates

This bar chart identifies the five occupations that, in 1992, employed most of the 1990 graduates from this program of study. Only the graduates who entered the labour force and were not pursuing their education on a full-time basis six to nine months after graduation are included in this chart. It is possible that some of these graduates already graduated from another program before 1990, the year of graduation from this program, or between 1990 and 1992, after graduating from this program. It is important to note that this section does not identify professions requiring a diploma in this program of study.

This list of occupations is not comprehensive. While there were graduates from this program working in occupations that are not shown, their number is statistically insignificant for the purpose of **Job Futures**.

The NOC and HRDC/Statistics Canada's National Graduates' Survey of 1990 graduates are the sources for this information.

## Graduates Speak Out

This table shows how 1990 graduates from this program of study answered specific questions in 1992 regarding their educational choices and their jobs. Their answers are compared to the responses given by graduates from all programs of study at the same level of education.

HRDC/Statistics Canada's National Graduates' Survey of 1990 graduates is the source for this information.

## Where Did They Go?

This bar chart provides information on the postgraduation activities of graduates from this program of study and compares these activities with those of graduates from all programs of study at the same level of education. The chart shows what proportion of graduates:

- continued their education on a *full-time* basis six to nine months after graduation;
- neither continued their education nor entered the labour force (stayed home);
- entered the labour force, i.e., work or were looking for work; or
- continued their education *part-time* while working.

HRDC/Statistics Canada's National Graduates' Survey of 1990 graduates is the source for this information.

## Percentage of Women

This bar chart indicates the percentage of women graduating from this program of study and compares this percentage to that of women graduating from all programs of study at the same level of education.

Unpublished 1994 administrative data from Statistics Canada are the source for this information.

## Work Life of Recent Graduates

This bar chart shows the percentage of 1990 graduates in this program of study who entered the labour force in 1992 and were employed full-time or part-time or were not employed. This percentage is compared to that of graduates who entered the work force from all fields of study at the same level of education.

HRDC/Statistics Canada's National Graduates' Survey of 1990 graduates is the source for this information.

## Work Prospects for Graduates

This bar-style graphic provides information on how labour market conditions for graduates from this program of study are expected to change from 1995 to 2000. The labour market situation is shown as *getting better*, i.e., it will improve from the current situation; *stable*, i.e., it will stay more or less the same; or *getting worse*, i.e., it will deteriorate from the current situation. HRDC's Canadian Occupational Projection System is the source for this information.

## About the Field of Study Classification (FOSC)

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The Field of Study Classification (FOSC) codes every program of study in Canada. The code is made up of a one-letter prefix and a number. For example, U72 represents Computer Sciences at the university undergraduate level.

The one-letter prefix identifies the *level of education*. Volume Two of **Job Futures** covers four levels of education based on the number of postsecondary schooling years normally required for graduation. These levels are organized from the highest number of required years of study to the lowest. The one-letter prefixes and corresponding levels of education are:

- M — Master's, university: includes master's degrees and graduate diplomas and certificates;
- U — Undergraduate, university: includes bachelor degrees and undergraduate diplomas and certificates;
- C — Community college: includes graduates of career programs, hospitals and schools of nursing, collèges d'enseignement général et professionnel (cegeps) and teachers' colleges, but excludes university transfer program graduates.
- T — Trade-vocational: includes pre-employment or pre-apprenticeship and skill upgrading courses lasting three months or more, but does not include block release apprenticeship training, basic training for skill development, language training and job readiness training.



The first number of a code identifies a *major area of study*. These areas of study are organized into broad groupings based on the commonality of their curriculum or area of specialization. **Job Futures** includes nine areas of study which are numbered from 0 to 8. These numbers correspond to listing of areas of study (see Box below).

When the first number is:	the major area of study is:
0	Arts
1	Business, Commerce, Management and Administration
2	Education
3	Engineering and Engineering Technologies
4	Humanities
5	Medicine and Health
6	Natural Sciences and Primary Industries
7	Physical Sciences
8	Social Sciences and Services

The remaining numbers classify *specific areas of study* within a major area of study. These specific areas are arranged alphabetically. For example, "U01" refers to Applied Arts at the university level. Applied Arts is higher on the alphabetical list than Music at the university level which is coded "U03."

# For More Information

Volume Two of **Job Futures** does not provide complete information on education and career planning. It is designed to be a complementary publication on career information. There are many sources of information about education and occupations. They include:

- The *National Occupational Classification (NOC)* — a system that describes occupations, employment and licensing requirements in Canada.
- *Career Moves* — a series of booklets on labour market trends and job opportunities in different sectors of the economy.
- *Career Directions* — detailed information about 160 jobs that do not require a university education.
- *The National Guide to College and University Programmes* — information on more than 10,000 postsecondary academic and training programs in Canada.
- *The Ellis Chart* — detailed information on provincial and territorial apprenticeship programs.

Readers who want more information on these publications and products should contact:

Human Resources Partnerships Directorate  
Occupational and Career Development Division  
Human Resources Development Canada  
140 Promenade du Portage  
Place du Portage  
Phase IV, 5th Floor  
Hull, Quebec K1A 0J9  
Fax: (819) 997-0227

The following occasional reports are also published by HRDC:

- *School Leavers Survey* — examines high school graduates and school-leavers with respect to their school experience, academic performance, part-time employment, labour market and changes to lifestyle.

- *National Apprenticable Trades Survey* — looks at the social characteristics of apprentices, their labour market experiences, the match between training and occupation, and factors leading to non-completion of trade programs.
- *National Graduate Survey* — examines such areas as the employment status, occupations, earnings and job satisfaction of university, community college and trade vocational graduates.
- *Adult Education and Training Survey* — reports on the learning activities of adults once they have completed their formal education with a special focus on job-related learning.

More information on these publications and products is available from:

Public Enquiries Centre  
Communications Branch  
Human Resources Development Canada  
Hull, Quebec K1A 0J9  
Fax: (819) 953-7260

The following education associations could provide relevant information:

Association of Canadian Community Colleges  
1223 Michael Street, Suite 200  
Ottawa, Ontario K1J 7T2  
Fax: (613) 746-6721

Association of Universities and Colleges of Canada  
350 Albert Street, Suite 600  
Ottawa, Ontario K1R 1B1  
Fax: (613) 563-9745

Natural Sciences and Engineering Research Council of Canada  
350 Albert Street  
Ottawa, Ontario K1A 1H5  
Fax: (613) 943-0742

Social Sciences and Humanities Research Council of Canada  
350 Albert Street  
Ottawa, Ontario K1P 6G4  
Fax: (613) 992-1787

Also, most provincial governments, often in collaboration with regional offices of Human Resources Development Canada, publish information on job prospects within their province. Regional Offices of HRDC also offer relevant publications of their own. Readers who want further information should contact their provincial Ministry of Education or Labour or the HRDC Regional Offices in their province.



# JOB FUTURES

## Fields of Study





# Applied Arts

Undergraduate University (3 or 4 years)

## Program of Study

Applied arts students receive training in graphic arts, photography, industrial or fashion design, performing arts, plastic arts and other areas.

- This program is offered by at least one university in every province except Newfoundland and Prince Edward Island.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Students must have completed high school with above average marks and a concentration in the arts. In some cases, applicants must have an interview and submit a portfolio of their work. Quebec students must complete a Diploma of Collegial Studies with arts courses related to their chosen area of specialization.

## Full-Time Earnings

1992

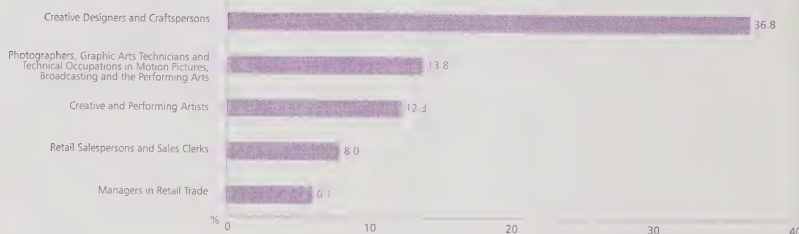


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



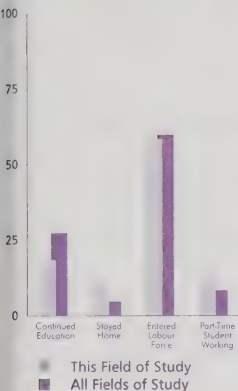
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	68%	71%
Are they satisfied with their work?	81%	91%
Does their work directly match their training?	39%	57%
Do they feel overqualified for their work?	49%	28%

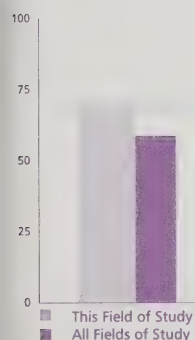
## Where Did They Go?

1992



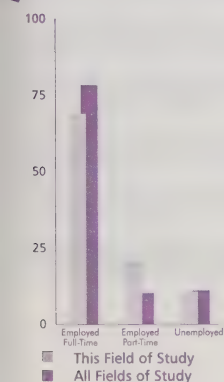
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 960 students graduated in applied arts. In most cases, graduates employed full-time found work in their field. Most work in the commercial arts. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and one out of five found part-time work; the unemployment rate for applied arts graduates is very close to that for other graduates at this level.
- Two years after graduation, full-time earnings are much lower than the average for other graduates at this level; income growth, between two and five years after graduation, is also slightly below average.
- Women account for approximately 68% of graduates, compared with 64% about 10 years ago.
- Applied arts graduates often work with graduates from mass communications or other arts graduates.
- Relatively few graduates change jobs. Although they frequently work at a variety of jobs before finding work in their field, they tend to stay put once they do.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had an average unemployment rate. Their relative earnings are declining and are low compared to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- The slight decline in the number of new job openings is expected to be balanced by declines in the number of people with the requisite skills for these jobs. The competition between these graduates and more experienced, but non-employed, workers will be about the same as in the recent past.
- These graduates will have more difficulty when searching for employment as creative and performing artists and photographers than as creative designers and retail salespersons. The labour market conditions for these occupations follow from the fact that they are concentrated in the retail trade and other business services industries. These industries are expected to exhibit about average growth over the remainder of the decade.

See also: This Field of Study Code: U01.  
Vol. 1 Occupations Cross-index: 513, 522, 524, 947.

## Work Prospects

1995 to 2000





# Music

## Undergraduate University (4 years)

### Program of Study

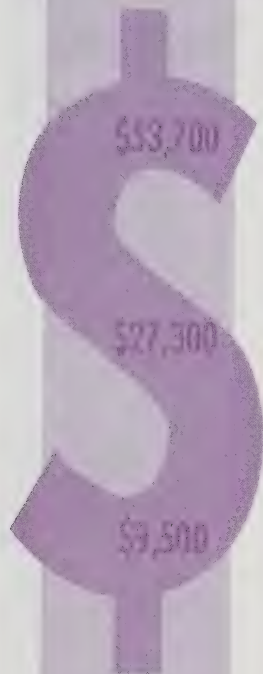
Students enrolled in this program study music history, music theory, music composition, teaching and other areas.

- Music programs are offered at major universities in all provinces. Enrolment is often limited.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a three-year program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must usually pass an audition testing their knowledge of music theory and their practical abilities. If they fail either of these areas, they are still eligible to take a preliminary year if they demonstrate a natural talent for music. Applicants must have completed high school and have received sufficient musical training. Quebec students must have a Diploma of Collegial Studies with a concentration in music.

### Full-Time Earnings

1992

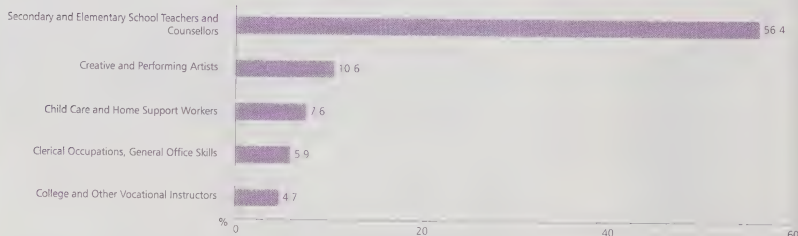


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,300 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

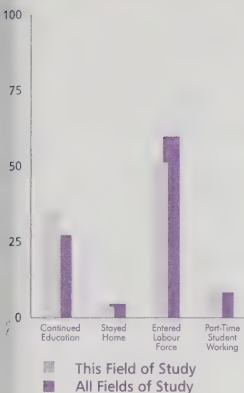
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	82%	71%
Are they satisfied with their work?	94%	91%
Does their work directly match their training?	45%	57%
Do they feel overqualified for their work?	33%	28%



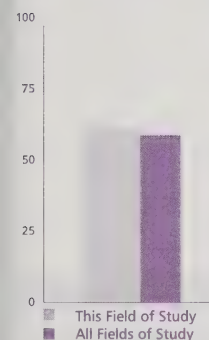
## Where Did They Go?

1992



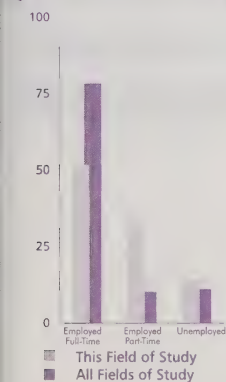
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,090 students received an undergraduate degree in music. Graduates usually found full-time work in teaching, although some work as musicians. Most music graduates are employed in the educational system. Information from various graduate surveys shows that:

- Only half the graduates found full-time jobs. One out of three graduates found part-time employment; the unemployment rate for music graduates is slightly higher than for other graduates at this level.
- Two years after graduation, full-time earnings are significantly lower than the average for other graduates at this level; but, between two and five years after graduation, income growth is slightly above average.
- Women account for approximately 60% of graduates, compared with 56% about 10 years ago.
- These graduates often work with graduates from other fine and performing arts either in the educational or cultural sectors of the economy.
- Few graduates employed as teachers or musicians change jobs. However, those who teach at the postsecondary level have a greater tendency to leave their jobs and become professional musicians.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their relative earnings are declining and are low relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to slightly worsen but remain fair.

- While new job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and counsellors than as creative and performing artists and child care and home support workers. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: U03.  
Vol. 1 Occupations Cross-index: 413, 414, 512, 513, 523.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

## for Graduates

How will labour market conditions change for these graduates?



# Commercial and Promotional Arts

Career Program, Community College (2 years)

## Program of Study

Students receive training in modelling, advertising or the commercial arts.

- This program is offered at community colleges in every province except Newfoundland and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have completed secondary school with good marks in art and English (French). They are usually required to submit samples of their work and a letter of recommendation as well.

## Full-Time Earnings

1992

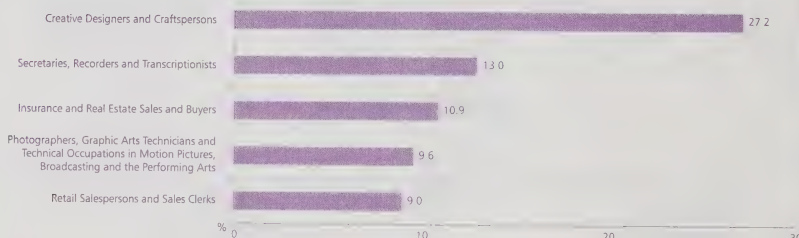


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



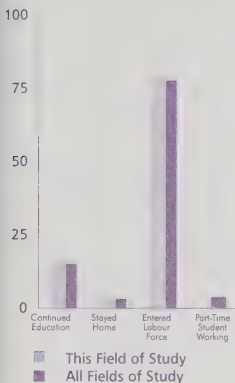
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	69%	74%
Are they satisfied with their work?	93%	93%
Does their work directly match their training?	43%	61%
Do they feel overqualified for their work?	44%	34%

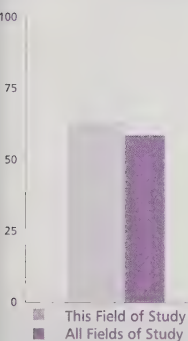
## Where Did They Go?

1992



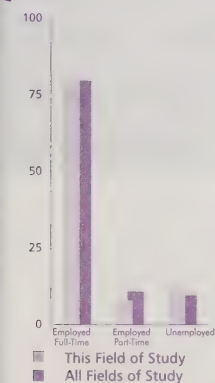
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,170 students graduated in commercial and promotional arts. Graduates usually find work in advertising as creative designers and photographers although some go into sales. They are employed in various sectors, frequently in retail sales. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and less than one out of 10 found part-time employment; the unemployment rate is somewhat higher than for other community college graduates.
- Two years after graduation, full-time earnings are lower than the average for other community college graduates and, between two and five years after graduation, increase at a somewhat slower pace.
- Women account for approximately 64% of graduates, the same percentage as about 10 years ago.
- These graduates often enter the same occupations as graduates from graphic, audio-visual, creative and design arts programs.
- A fairly large number of graduates change jobs. A high percentage of those who are working in creative design two years after graduation are employed as bookkeepers three years later. The majority of graduates working in management positions two years after graduation left their jobs and, in many cases, went into advertising.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a somewhat higher than average and rising unemployment rate. Their earnings are declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- Although new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more success when searching for employment as public relations practitioners and creative designers. These occupations are concentrated in printing and publishing, and business services industries. These industries are expected to exhibit average or below average growth over the remainder of the decade.

See also: This Field of Study Code: C02.  
Vol. 1 Occupations Cross-index: 513, 522, 524, 947.

## Work Prospects

1995 to 2000





# Creative and Design Arts

Career Program, Community College (2 years)

## Program of Study

Students enrolled in this program learn about fashion arts, interior decorating and jewellery design.

- Creative and design arts programs are offered at community colleges in British Columbia, Alberta, Ontario and New Brunswick, and at cegeps in Quebec.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in art or drafting and good marks in English (French) and mathematics. Applicants must usually submit samples of their work and a letter of recommendation and, in some cases, undergo an interview.

## Full-Time Earnings

1992



of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

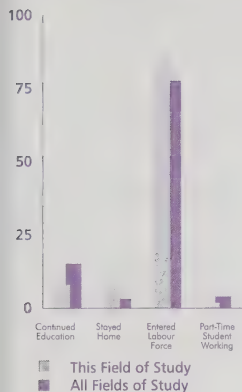
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	60%	74%
Are they satisfied with their work?	93%	93%
Does their work directly match their training?	37%	61%
Do they feel overqualified for their work?	43%	34%



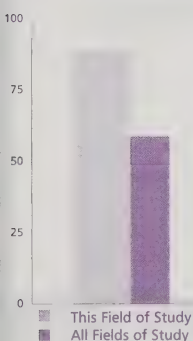
## Where Did They Go?

1992



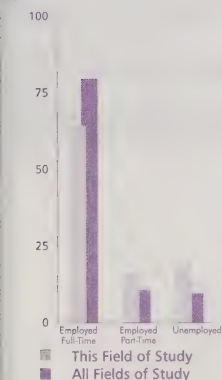
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,050 students graduated in creative and design arts. Graduates usually find work in fashion occupations, often as creative artists and craftpersons, photographers, graphic arts technicians and film technicians. These graduates are also usually employed in the retail sales sector. Information from various graduate surveys shows that:

- Two thirds of graduates found full-time employment, and one out of six found part-time work; the unemployment rate for graduates is double the average for other community college graduates.
- Two years after graduation, full-time earnings are lower than the average for other community college graduates but, between two and five years after graduation, increase at twice the average rate.
- Women account for approximately 89% of graduates, compared with 84% about 10 years ago.
- These graduates usually enter the same occupations as other graduates from fashion design and marketing programs.
- A relatively high number of graduates change jobs. Of all the graduates working in fashion occupations two years after graduation, a relatively small number were managers three years later. Graduates who were in sales two years after graduation moved into clerical positions three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a much higher than average and rising unemployment rate. Their earnings are lower than average but rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- Although new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace.
- These graduates will have more success when searching for employment as creative designers, craftpersons or retail salespersons than as creative and performing artists or drafting technologists. The labour market conditions for the former occupations follow from the fact that they are concentrated in the retail trade industry which is expected to exhibit average growth over the remainder of the decade.

**See also:** This Field of Study Code: C03. Related Code: T03.  
Vol. 1 Occupations Cross-index: 225, 513, 522, 524, 642.

## Work Prospects

1995 to 2000







# Fine Arts

## Career Program, Community College (2 years)

### Program of Study

This program includes the study of dance, music, acting and other performing arts, sculpture, painting and handicrafts.

- Fine arts programs are offered at community colleges in British Columbia, Alberta, Ontario and New Brunswick, and at cegeps in Quebec.

**Prerequisites:** Admission requirements vary depending on the institution and the program. Generally, students must have a high school diploma with good marks in English (French). Applicants must usually submit samples of their work and a letter of recommendation, and undergo an interview and audition.

### Full-Time Earnings

1992

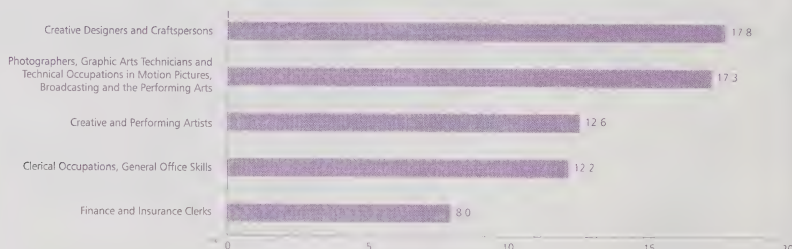


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

### Occupations of Graduates

1992



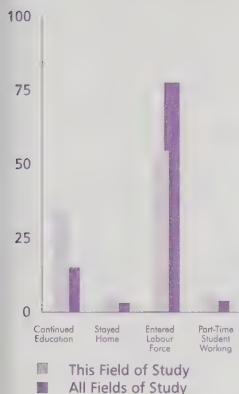
### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	91%	74%
Are they satisfied with their work?	88%	93%
Does their work directly match their training?	24%	61%
Do they feel overqualified for their work?	61%	34%

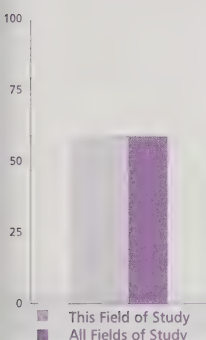
## Where Did They Go?

1992



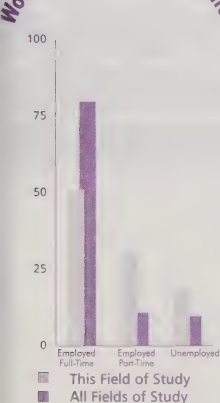
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,180 students received a college diploma in fine arts. Graduates find work in a variety of fields, some as creative and performing artists, creative designers, photographers and graphic arts technicians, others as clerks or teachers. These graduates are often employed in recreation and various other industries. Information from various graduate surveys shows that:

- Half of these graduates found full-time employment, and less than one out of three found part-time employment; the unemployment rate is higher than for other community college graduates.
- Two years after graduation, full-time earnings are significantly lower than the average for other community college graduates and, between two and five years after graduation, increase at about the average rate.
- Women account for approximately 58% of graduates, compared with 65% about 10 years ago.
- These graduates often find jobs in the same occupations as graduates from graphic and audio-visual arts programs.
- A very large number of graduates change jobs. Over two thirds of the graduates who were working in the arts two years after graduation have changed jobs three years later. Several are in management, administration or teaching.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a much higher than average and rising unemployment rate. Their earnings are lower than average and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- Although new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more success when searching for employment as creative designers and photographers than as teachers or office clerks. The stable labour market conditions for the former occupations follow from the fact that they are concentrated in the retail trade and other service industries which are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: C04.  
Vol. 1 Occupations Cross-index: 414, 513, 522, 524.

## Work Prospects

1995 to 2000



# Graphic and Audio-Visual Arts

Career Program, Community College (2 years)

## Program of Study

Students enrolled in this program receive training in photography, recording music, printing and publishing.

- This program is offered at community colleges in every province except Nova Scotia and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in mathematics. Applicants are usually required to submit a sample of their work and a letter of recommendation, and to undergo an interview.

## Full-Time Earnings

1992

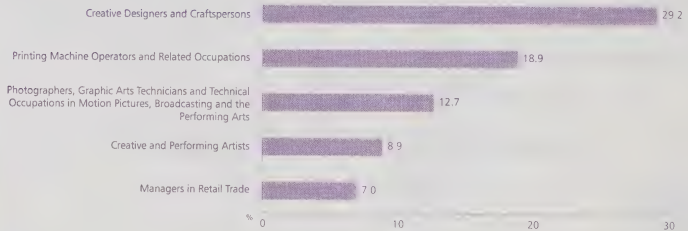


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

THIS FIELD OF STUDY

ALL FIELDS OF STUDY

Would they make the same educational choice again?

71%

74%

Are they satisfied with their work?

87%

93%

Does their work directly match their training?

33%

61%

Do they feel overqualified for their work?

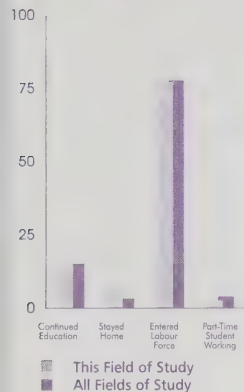
41%

34%



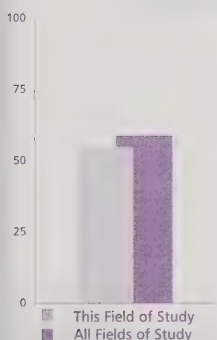
## Where Did They Go?

1992



## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 970 students graduated in graphic and audio-visual arts. Graduates are usually employed in creative design, photography or graphic arts, or as printing machine operators, although some enter retail sales. They usually work in the printing and publishing industry. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and less than one out of six found part-time employment; the unemployment rate for graduates is somewhat higher than for other community college graduates.
- Two years after graduation, full-time earnings are significantly lower than the average for other community college graduates but, between two and five years after graduation, increase at slightly less than the average rate.
- Women account for approximately 55% of graduates, compared with 41% about 10 years ago.
- These graduates often enter the same occupations as graduates from commercial arts, creative and design arts and marketing programs.
- Not many graduates change jobs. Most of those working in photography two years after graduation are in the same field three years later. However, almost all graduates working in publishing two years after graduation are in sales or management three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had an above average and rising unemployment rate. Their earnings are lower than average and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- Although new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be about average.
- These graduates will have more success when searching for employment as graphic designers, illustrating artists, salespersons and typesetters than as printing machine operators or drafting technologists. Amusement and recreation services and radio and television are growth areas and are attractive options for graduates from this field of study.

See also: This Field of Study Code: C05. Related Code: T04.  
Vol. 1 Occupations Cross-index: 225, 513, 522, 524, 947.

## Work Prospects

1995 to 2000







# Creative and Design Arts

Trade/Vocational College (8 months)

## Program of Study

Students enrolled in this program are trained in the fashion arts and interior decorating.

- Creative and design arts are offered in Quebec, Ontario, Saskatchewan, Alberta and British Columbia.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

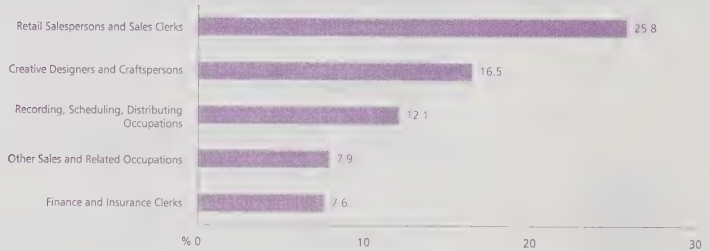


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



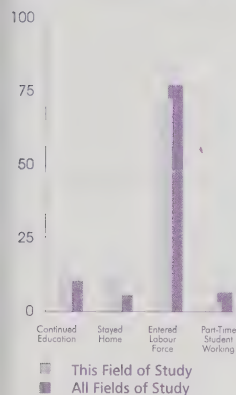
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	80%	74%
Are they satisfied with their work?	75%	92%
Does their work directly match their training?	17%	47%
Do they feel overqualified for their work?	44%	36%

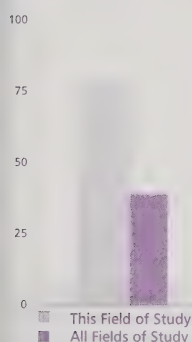
## Where Did They Go?

1992



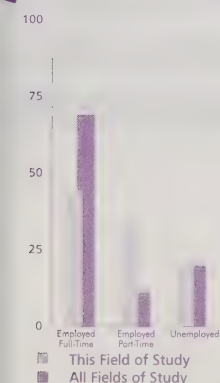
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 110 students received a diploma in creative and design arts from a trade/vocational college. The majority found work in sales. Some are also employed as graphic designers, photographers or sales clerks. Graduates are usually employed in the retail industry. Information from various graduate surveys shows that:

- More than two out of five found full-time employment, and more than one out of three found part-time employment; the unemployment rate for these graduates is about the same as for other trade/vocational graduates.
- Two years after graduation, full-time earnings are below the average for other trade/vocational graduates and increase at half the average rate over the next three years.
- Women account for approximately 78% of graduates, compared with 70% about 10 years ago.
- These graduates often enter the same occupations as university graduates from applied arts, music, English and mass communications and community college graduates from graphic and audio-visual arts.
- A significant number of graduates change jobs. Two years after graduation, most graduates are employed in the retail industry. Three to five years after graduation, many of them change fields, often finding jobs in commercial and promotional arts, or photography.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are rising but low relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these occupations is not expected to keep pace. The competition among these graduates will be less than average.
- These graduates will have more difficulty when searching for employment in creative design occupations than in retail sales, recording and photographic arts. These occupations are concentrated in the retail and business services industries which are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: T03. Related Code: C03.  
Vol. 1 Occupations Cross-index: 522, 524, 642, 666.

## Work Prospects

1995 to 2000





# Graphic and Audio-Visual Arts

Trade/Vocational College (6 months)

## Program of Study

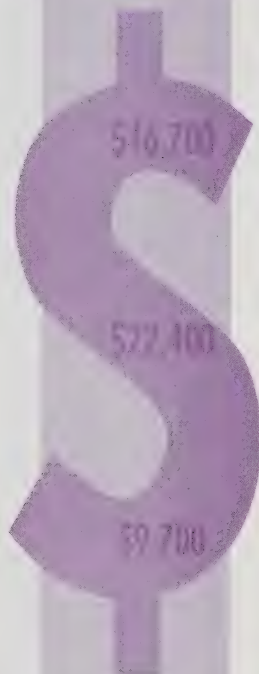
Students receive training in such areas as printing, publishing and music recording.

- This program is offered in Quebec, Ontario, Saskatchewan, Alberta and British Columbia.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma and some community college education. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

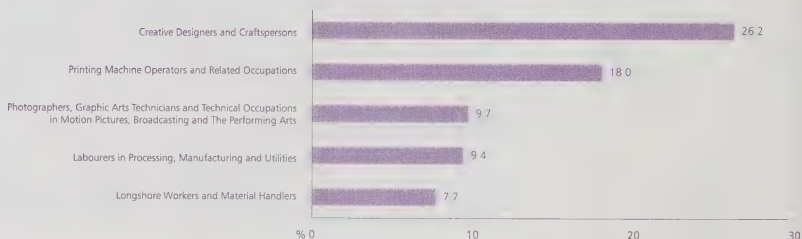


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

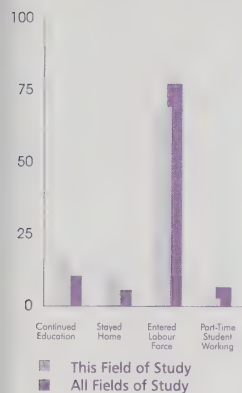
THIS FIELD OF STUDY ALL FIELDS OF STUDY

Would they make the same educational choice again?	76%	74%
Are they satisfied with their work?	81%	92%
Does their work directly match their training?	27%	47%
Do they feel overqualified for their work?	60%	36%



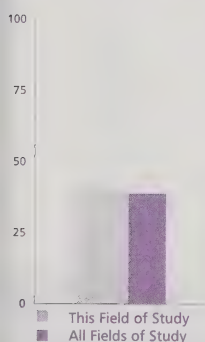
## Where Did They Go?

1992



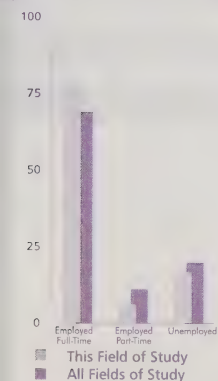
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 620 students received a diploma in graphic and audio-visual arts from a trade/vocational college. Graduates usually found employment as graphic artists, illustrating artists or photographers in the printing and publishing industry. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is somewhat below the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are slightly below the average for other graduates at this level but increase at an above average rate over the next three years.
- Women account for approximately 40% of graduates, about the same rate as 10 years ago.
- These graduates often enter the same occupations as university graduates in applied arts, music and mass communications and community college graduates in creative and design arts, mass communications and graphic and audio-visual arts.
- Two years after graduation, most graduates are employed in the printing occupations. Three years later, the majority have changed occupations. Many work in management or administration, and some in commercial art and photography. Most of those graduates employed in commercial art and photography two years after graduation went into the printing occupations or retail sales between the third and fifth years of their careers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a below average unemployment rate. Their earnings are low and declining but high relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition among these graduates will be average.
- These graduates will have more difficulty when searching for employment as creative artists or photographers than as salespersons or creative designers. The labour market conditions for these occupations follow from the fact that they are concentrated in the retail trade industry which is expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: T04. Related Code: C05.  
Vol. 1 Occupations Cross-index: 513, 522, 524, 947.

## Work Prospects

1995 to 2000







# Personal Arts

Trade/Vocational College (11 months)

## Program of Study

Students enrolled in this program are trained in barbering, hair dressing, hair styling, cosmetology and manicuring

- Personal arts programs are offered in all provinces except Quebec.

**Prerequisites:** Admission requirements vary depending on the type of program (pre-employment or skill upgrading) and the institution, but applicants generally have a high school diploma. Applicants are advised to consult the educational institution concerned for more information.

### Full-Time Earnings

1992

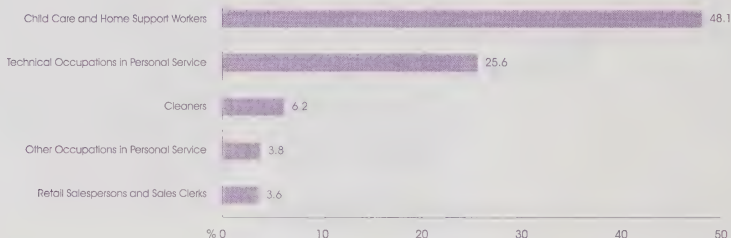


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

### Occupations of Graduates

1992



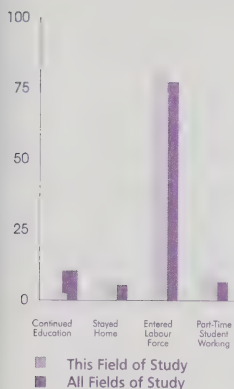
### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	75%	74%
Are they satisfied with their work?	95%	92%
Does their work directly match their training?	50%	47%
Do they feel overqualified for their work?	26%	36%

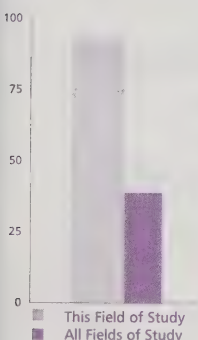
## Where Did They Go?

1992



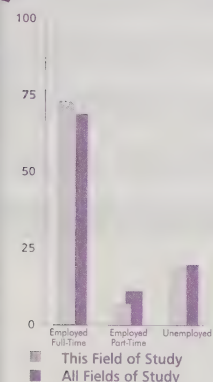
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 480 students graduated in personal arts. In most cases, graduates employed full-time found work in their field. Graduates generally work in fields relating to hairstyling, cosmetology or manicuring in the personal services industry. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and one out of ten found part-time work; the unemployment rate for personal arts graduates is the same as the average for other graduates at this level.
- Two years after graduation, full-time earnings are much lower than the average for other graduates at this level; income growth between two and five years after graduation, is also below average.
- Women account for approximately 93% of graduates, about the same proportion as 10 years ago.
- Personal arts graduates often find work in the same occupations as graduates from the social services field of study.
- Many graduates change jobs between the second and fifth years of their careers. Most movements are out of barbering and hairdressing into service management and sales occupations.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair to good.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training, and a significantly lower than average proportion feel overqualified for their current job.

Over the next five years, the labour market situation for these graduates is expected to remain fair to good.

- Job openings are expected to be the same as over the previous five-year period, and the number of people with the requisite skills for these jobs is also expected to be about the same. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment in child care and home support occupations than in the technical and personal services occupations. The improving labour market conditions for the latter occupations follow from the fact that they are concentrated in the personal and household services industries which are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: T05.  
Vol. 1 Occupations Cross-index: 627, 642, 647, 648, 666.

## Work Prospects

1995 to 2000



How will  
labour market  
conditions  
change  
for these  
graduates?



# Commerce - Business Administration

Master's University (2 years)

## Program of Study

Students enrolled in this program study accounting, finance, industrial relations, marketing, inventory management, business economics and strategic planning.

- This program is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in commerce or the equivalent. An interview, a graduate admissions test and letters of recommendation are also required.

### Full-Time Earnings

1992

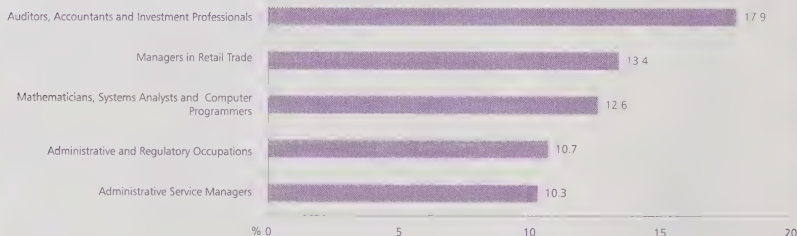


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

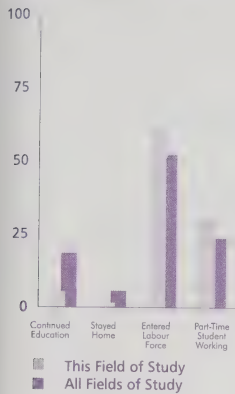
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	90%	83%
Are they satisfied with their work?	93%	95%
Does their work directly match their training?	65%	69%
Do they feel overqualified for their work?	62%	57%



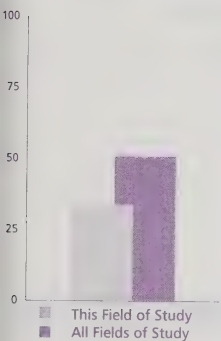
## Where Did They Go?

1992



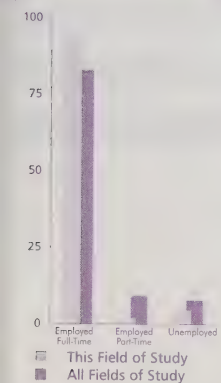
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 3,980 students received a master's degree in commerce. Most found work in their field. Some are in managerial or administrative occupations. These graduates are usually employed in the banking or finance industry. Information from various graduate surveys shows that:

- Nineteen out of 20 graduates found employment, virtually all full-time; the unemployment rate for these graduates is very low.
- Two years after graduation, full-time earnings are well above the average for other master's graduates and increase at one and a half times the average rate for the next three years.
- Women account for approximately 34% of graduates, compared with 25% about 10 years ago.
- These graduates often enter the same occupations as graduates from business or economic fields at the university and community college levels.
- A fairly significant number of graduates change jobs. Some move from managerial to administrative positions between the third and fifth years of their careers, while others move from administrative to managerial positions.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are high but declining relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as accountants and investment professionals than as retail trade managers, senior managers and finance and insurance clerks. The labour market conditions for the latter occupations follow from the fact that they are concentrated in the finance, insurance and real estate, wholesale trade and professional services industries which are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: M11. Related Code: U11.  
Vol. 1 Occupations Cross-index: 001, 011, 012, 111, 416.

## Work Prospects

1995 to 2000







# Specialized Administration

Master's University (2 years)

## Program of Study

Students enrolled in this program study public administration, health care administration, and hotel and restaurant administration.

- This program is offered in New Brunswick, Quebec and Ontario.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in administration or a related discipline. An interview, a graduate admissions test and letters of recommendation are also required.

## Full-Time Earnings

1992

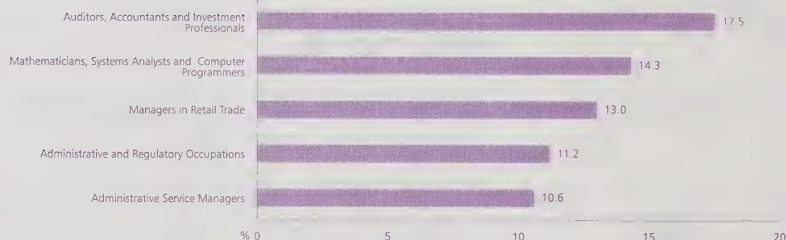


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



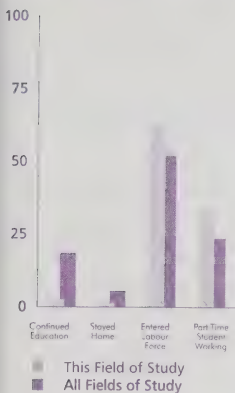
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	75%	83%
Are they satisfied with their work?	91%	95%
Does their work directly match their training?	67%	69%
Do they feel overqualified for their work?	51%	57%

## Where Did They Go?

1992



## After Graduation

In 1994, 480 students received a master's degree in specialized administration. Most found work in their field, often in managerial or administrative occupations. Most graduates are employed by hospitals. Information from various graduate surveys shows that:

- Nearly all graduates found employment, virtually all full-time; the unemployment rate for these graduates is very low.
- Two years after graduation, full-time earnings are well above the average for other master's graduates and increase at one and a half times the average rate for the next three years.
- Women account for 52% of the graduates, compared with 41% about 10 years ago.
- These graduates often enter the same occupations as university commerce graduates and institutional management graduates at the community college level.
- A fairly significant number of graduates change jobs. Some move from managerial to administrative positions between the third and fifth years of their careers, while others move from administrative to managerial positions.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at the same pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as auditors, investment professionals and administrators than as managers in retail trade, senior managers and finance and insurance clerks. The labour market conditions for the latter occupations follow from the fact that they are concentrated in the finance, insurance and real estate, wholesale trade and professional services industries which are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: M12. Related Code: U12.  
Vol. 1 Occupations Cross-index: 001, 011, 012, 062, 111.

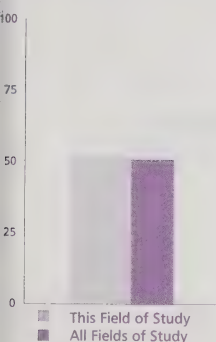
## Work Prospects

1995 to 2000



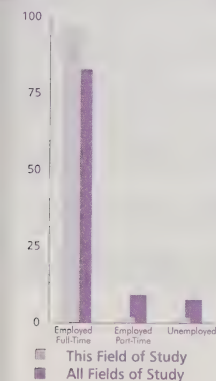
## Percentage of Women

1994



## Work Life of Recent Graduates

1992





## Full-Time Earnings

1992



## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

# Commerce - Business Administration

Undergraduate University (3 or 4 years)

## Program of Study

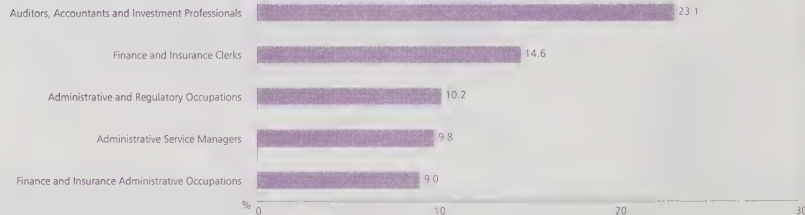
Commerce students study accounting, marketing, production management, personnel management, industrial relations and finance.

- Commerce programs are offered at universities in all provinces. Enrolment is often limited.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with above average grades in mathematics and English (French). Quebec students must have a Diploma of Collegial Studies.

## Occupations of Graduates

1992



## Graduates Speak Out

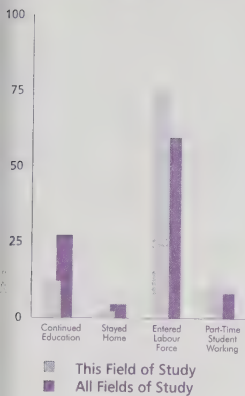
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	72%	71%
Are they satisfied with their work?	91%	91%
Does their work directly match their training?	60%	57%
Do they feel overqualified for their work?	27%	28%



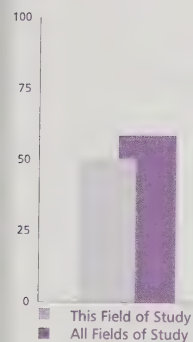
## Where Did They Go?

1992



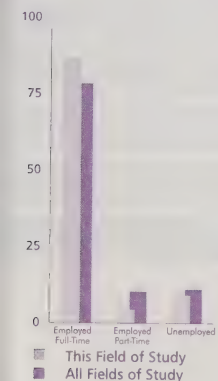
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 16,210 students graduated in commerce. Most of the graduates working full-time found jobs in their field, usually in accounting or bookkeeping. Information from various graduate surveys shows that:

- Nine out of ten graduates found employment, usually full-time. The unemployment rate for commerce graduates is slightly lower than for other graduates at this level.
- Two years after graduation, full-time earnings are close to the average for other graduates at this level and, between two and five years after graduation, increase at a slightly quicker pace.
- Women account for approximately 50% of graduates, compared with 35% about 10 years ago.
- University and community college graduates in commerce-related fields of study and economics often find work in the same occupations as these graduates.
- Not many graduates change jobs; most of those employed in management or administration two years after graduation are still employed in those fields three years later, although some have become bookkeepers or clerical workers. The case is different for those in sales where, five years after graduation, the majority have changed jobs and are usually working in management or administration.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average but rising unemployment rate. Their relative earnings are stable and average when compared to those of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be approximately the same as in the recent past.
- These graduates will have more difficulty when searching for employment as investment professionals and administrators and regulators than as retail trade managers, systems analysts and finance and insurance clerks. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in the wholesale trade and professional services industries. These industries are expected to exhibit average to above average growth over the remainder of the decade.

**See also:** This Field of Study Code: U11. Related Codes: M11, C14.  
Vol. 1 Occupations Cross-index: 011, 062, 111, 122, 123.

## Work Prospects

1995 to 2000







# Specialized Administration

Undergraduate University (3 years)

## Program of Study

This field of study covers specialized administration and management programs in the public sector, health services, the hotel and food industries, real estate, etc.

- This program is offered at universities in every province except Newfoundland, Manitoba and Alberta.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with above average marks in mathematics and English (French). Quebec students must have a Diploma of Collegial Studies. Applicants who do not meet the prerequisites can enrol in a certificate program if they have relevant experience and skills.

Full-Time Earnings

1992

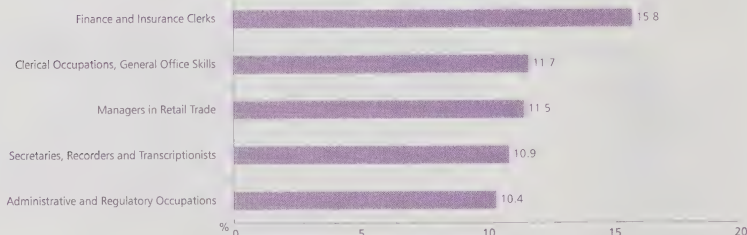


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



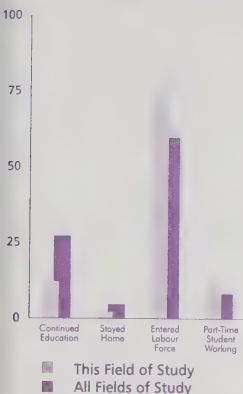
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	70%	71%
Are they satisfied with their work?	92%	91%
Does their work directly match their training?	41%	57%
Do they feel overqualified for their work?	61%	28%

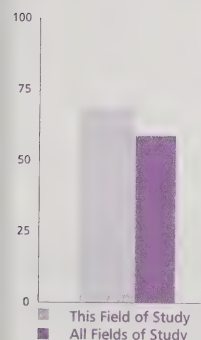
## Where Did They Go?

1992



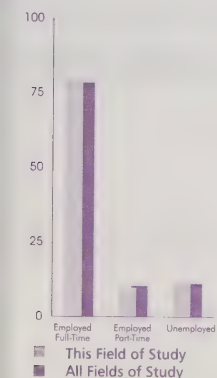
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 330 students graduated in specialized administration. Many of the graduates working full-time found jobs in their field. Many are in management or administration, although some are employed in clerical jobs. Graduates usually find work in the finance, health, and food and accommodation sectors of the economy. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for specialized administration graduates is similar to that of other graduates at this level.
- Two years after graduation, full-time earnings are just slightly higher than the average for other graduates at this level and, between two and five years after graduation, increase at a slightly faster pace.
- Women account for approximately 68% of graduates, compared with 51% about 10 years ago.
- University and community college graduates in commerce, economics and institutional management often find work in the same occupations as these graduates.
- Not many graduates change jobs. The majority of those managing health care institutions two years after graduation are in the same field three years later. Managers and administrators in other fields seem more mobile.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average but rising unemployment rate. Their earnings are average but rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen but remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase. The competition between these graduates will be about the same as in the recent past.
- These graduates will have more difficulty when searching for employment as investment professionals and in administrative and regulatory occupations than as managers in retail trade and as finance and insurance clerks. The labour market conditions for the latter occupations follow from the fact that they are concentrated in the health, food and accommodation and professional services industries. These industries are expected to exhibit slightly above average growth over the remainder of the decade.

See also: This Field of Study Code: U12. Related Codes: M12, C13. Vol. 1 Occupations Cross-index: 001, 011, 062, 111, 122.

## Work Prospects

1995 to 2000





# Financial Management - Accounting

Career Program, Community College (2 years)

## Program of Study

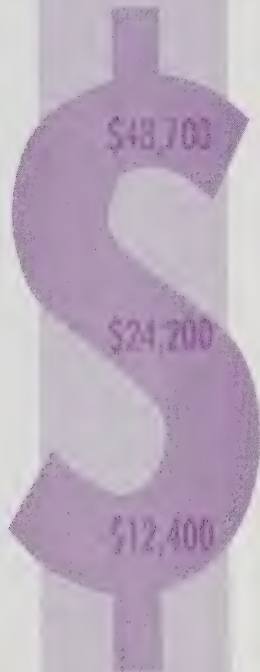
Students receive training in bookkeeping, office management and accounting.

- This program is offered at community colleges in every province.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with advanced courses in mathematics.

## Full-Time Earnings

1992

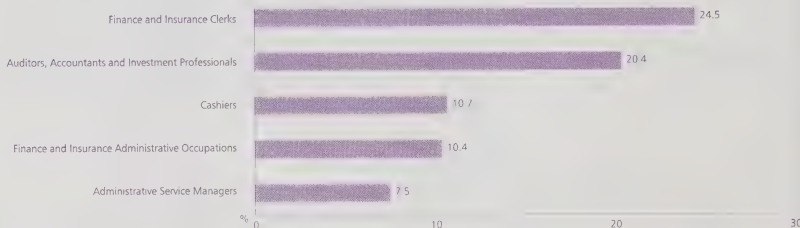


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

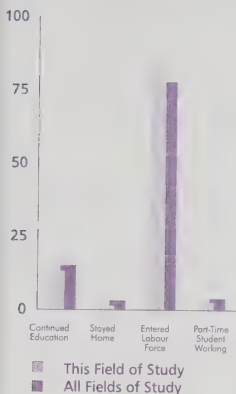
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	76%	74%
Are they satisfied with their work?	93%	93%
Does their work directly match their training?	62%	61%
Do they feel overqualified for their work?	23%	34%



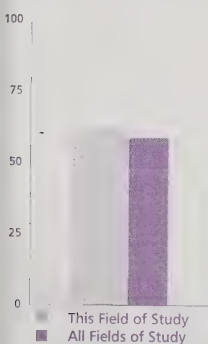
## Where Did They Go?

1992



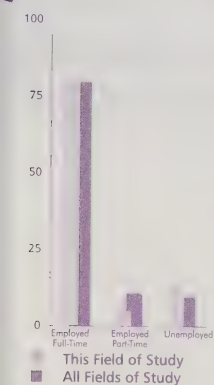
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,910 students graduated in financial management (accounting). Most graduates work as finance and insurance clerks, investment professionals and retail sales administrators and managers. They are often employed in the retail sales and finance sectors. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is higher than for other community college graduates.
- Two years after graduation, full-time earnings are lower than the average for other community college graduates; but, between two and five years after graduation, income growth is above average.
- Women account for approximately 63% of graduates, compared with 59% about 10 years ago.
- Graduates employed as administrative officers or bookkeepers usually work with graduates of management and administration or financial management programs.
- A large number of these graduates change jobs. A fairly high percentage of those who were administrative officers two years after graduation became managers or clerical workers five years into their careers. A number of graduates employed as accounting clerks two years after graduation changed jobs three years later, mainly to become administrative officers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a rising unemployment rate. Their earnings are lower than average but rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- Although new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more success when searching for employment as accounting and payroll clerks and in retail sales than in investment or administration areas. These occupations are concentrated in the finance, insurance and real estate, and retail sales industries which are expected to exhibit average growth over the remainder of the decade.

**See also:** This Field of Study Code: C11. Related Code: T11.  
Vol. 1 Occupations Cross-index: 111, 122, 123, 143, 661.

## Work Prospects

1995 to 2000







# Financial Management - Other

Career Program, Community College (2 years)

## Program of Study

Students receive training in investment management, real estate appraisal, property management and banking, but not in accounting practices.

- This program is offered at community colleges in every province except Prince Edward Island, Nova Scotia, New Brunswick and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have completed secondary school with good marks in mathematics and English (French).

## Full-Time Earnings

1992

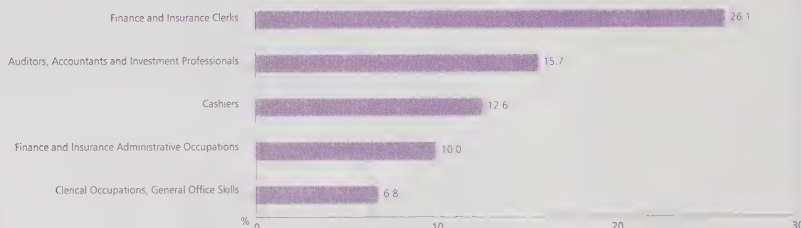


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



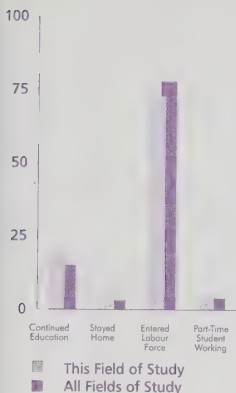
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	69%	74%
Are they satisfied with their work?	92%	93%
Does their work directly match their training?	53%	61%
Do they feel overqualified for their work?	44%	34%

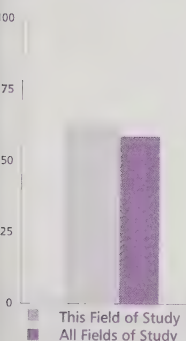
## Where Did They Go?

1992



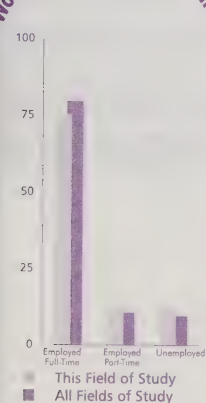
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 2,450 students received a college diploma in financial management other than accounting. They work mainly as finance and insurance clerks, administrators and investment professionals. These graduates usually work in financial and realty institutions. Information from various graduate surveys shows that:

- Three out of four graduates found full-time work, and less than one out of eight found part-time work; the unemployment rate for graduates is slightly higher than the average for other community college graduates.
- Two years after graduation, full-time earnings are lower than for other community college graduates but, between two and five years after graduation, increase at an above-average rate.
- Women account for approximately 63% of graduates, compared with 59% about 10 years ago.
- Graduates often work with graduates from management, administration and accounting programs.
- These graduates have a fairly high tendency to change jobs. A number of graduates who were administrative officers two years after graduation were working as accounting clerks three years later. Half of the graduates working as accounting clerks two years after graduation were administrative officers or managers three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair to poor.

- Recent graduates from this field of study have had a rising and above average unemployment rate. Their earnings are stable but low relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair to poor.

- Although new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more success when searching for employment as finance and insurance clerks and in retail sales than in investment or administration areas. These occupations are concentrated in the finance, insurance and real estate, and retail sales industries which are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: C12.  
Vol. 1 Occupations Cross-Index: 111, 122, 123, 143, 661.

## Work Prospects

1995 to 2000





# Institutional Management

Career Program, Community College (2 years)

## Program of Study

Students enrolled in this program learn how to manage institutions such as hospitals, other health care facilities, hotels and resorts.

- Institutional management programs are offered at community colleges in every province except Prince Edward Island, Nova Scotia and Quebec.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have completed secondary school with good marks in mathematics and English (French). Some institutions require applicants to undergo an aptitude test and an interview.

## Full-Time Earnings

1992

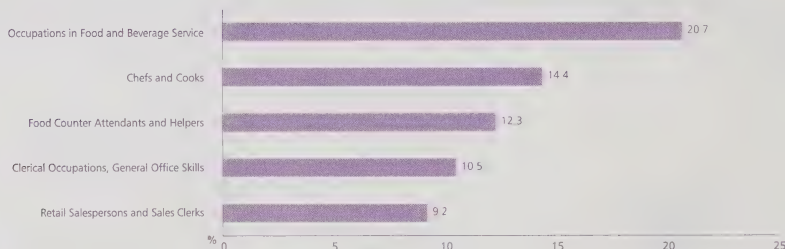


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	58%	74%
Are they satisfied with their work?	93%	93%
Does their work directly match their training?	33%	61%
Do they feel overqualified for their work?	58%	34%



## After Graduation

In 1994, 930 students graduated in institutional management. Most graduates find work in food and beverage preparation, while some are employed as clerks or retail salespersons. These graduates are usually employed in the accommodation and food services and retail sales industries. Information from various graduate surveys shows that:

- Well over four out of five graduates found full-time work, and one out of 20 found part-time work; the unemployment rate for these graduates is about the same as for other community college graduates.
- Two years after graduation, full-time earnings are significantly lower than the average for other community college graduates but, between two and five years after graduation, increase at about the average rate.
- Women account for about 62% of graduates, compared with 52% about 10 years ago.
- These graduates often find work in the same occupations as graduates from management, administration and marketing.
- A high number of graduates change jobs. Over half of the graduates working as managers or administrators two years after graduation changed jobs three years later. Most of those working in food and beverage preparation are employed as administrative officers by the fifth year of their careers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a worsening relative unemployment rate. Their earnings are lower than average and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

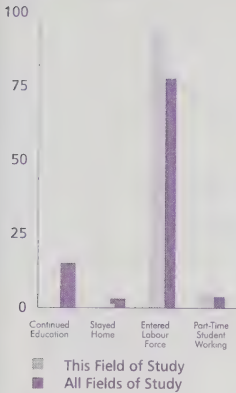
Over the next five years, the labour market situation for these graduates is expected to improve yet remain fair.

- New job openings are expected to outpace the number of people with the requisite skills for these jobs. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as food and beverage servers, salespersons, clerical workers and in other occupations directly related to the specific institutions they wish to manage. The better labour market conditions for these occupations follow from the fact that they are concentrated in the food and accommodation industry which is expected to exhibit growth at more than twice the average rate over the remainder of the decade.

**See also:** This Field of Study Code: C13. Related Code: U12.  
Vol. 1 Occupations Cross-index: 062, 063, 624, 642, 645.

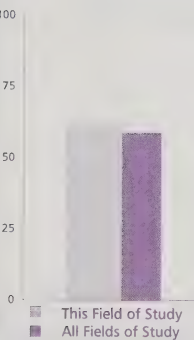
### Where Did They Go?

1992



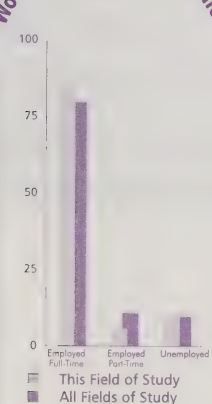
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000





# Management and Administration - Business and Commerce

Career Program, Community College (2 years)

## Program of Study

Students receive training in bookkeeping, administration and accounting.

- This program is offered at community colleges in every province.
- In some cases, students must complete a work placement before graduating.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have completed high school with good marks in mathematics, English (French) and, in some cases, bookkeeping. Some programs require applicants to undergo a mathematics test and an interview.

## Full-Time Earnings

1992

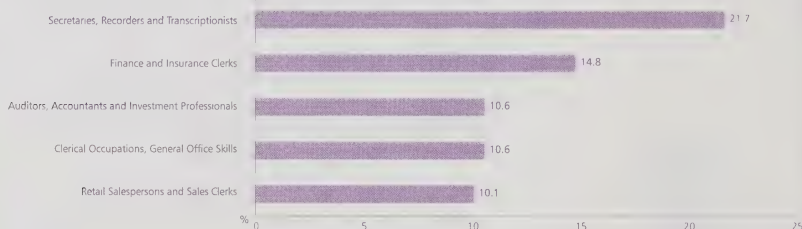


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



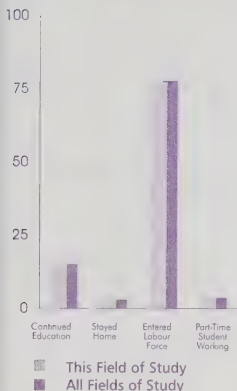
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	70%	74%
Are they satisfied with their work?	91%	93%
Does their work directly match their training?	49%	61%
Do they feel overqualified for their work?	40%	34%

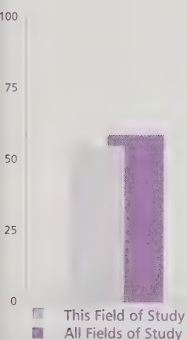
## Where Did They Go?

1992



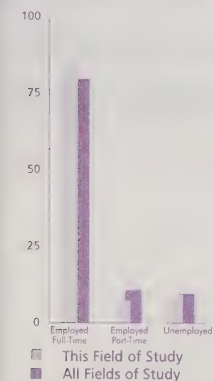
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 4,200 students graduated in management and administration. Most graduates find jobs in their field as administrative officers, investment professionals or clerks. Graduates usually work in financial and realty institutions. Information from various graduate surveys shows that:

- More than four out of five graduates found full-time employment, and more than one out of 20 found part-time employment; the unemployment rate for graduates is also about the same as for other community college graduates.
- Two years after graduation, full-time earnings are slightly lower than the average for other community college graduates but, between two and five years after graduation, increase at an above average rate.
- Women account for approximately 55% of graduates, compared with 49% about 10 years ago.
- These graduates often enter the same occupations as graduates from accounting, financial management programs and marketing.
- A fairly large number of graduates change jobs, with those working as administrative officers becoming managers. The majority of graduates employed in clerical positions two years after graduation changed jobs three years later, usually to become administrative officers, managers or administrators.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a falling but average unemployment rate. Their earnings are average but rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- Although new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more success when searching for employment in the retail sales and clerical areas than in investment or administration areas. These occupations are concentrated in the finance, insurance and real estate, education and professional services industries which are expected to exhibit weak growth over the remainder of the decade.

**See also:** This Field of Study Code: C14. Related Codes: U11, T12.  
Vol. 1 Occupations Cross-index: 011, 062, 111, 123, 124.

## Work Prospects

1995 to 2000



# Marketing

Career Program, Community College (2 years)

## Program of Study

Students enrolled in this program learn about marketing techniques and strategies.

- Marketing programs are offered at community colleges in every province except Newfoundland, Prince Edward Island, New Brunswick and Manitoba.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with advanced courses in mathematics. Applicants must also undergo mathematics and English (French) diagnostic tests and an interview.

### Full-Time Earnings

1992

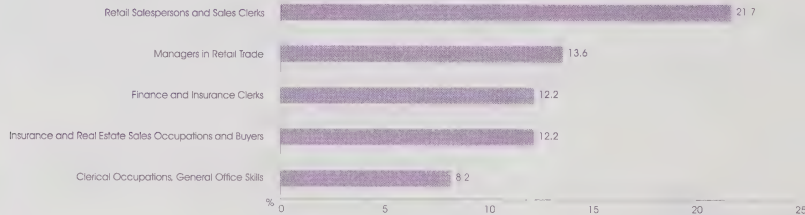


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,700 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

1992

#### HOW MANY SAID YES

#### THIS FIELD OF STUDY

#### ALL FIELDS OF STUDY

Would they make the same educational choice again?

62%

74%

Are they satisfied with their work?

87%

93%

Does their work directly match their training?

32%

61%

Do they feel overqualified for their work?

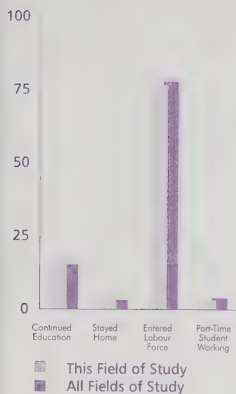
47%

34%



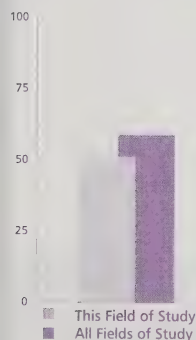
## Where Did They Go?

1992



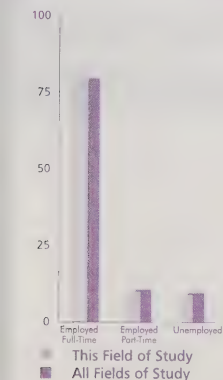
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,890 students graduated in marketing. Graduates are usually employed in managerial or administrative positions, but some find jobs as sales clerks. They are employed in various sectors, most notably sales. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for graduates is about the same as for other community college graduates.
- Two years after graduation, full-time earnings are lower than the average for other community college graduates and, between two and five years after graduation, increase at about a quarter of the average rate.
- Women account for approximately 51% of graduates, compared with 41% about 10 years ago.
- Graduates employed in management, administration or the sale of consumer goods usually work with graduates from management and administration programs.
- A very large number of graduates change jobs. Half of the graduates employed in sales two years after graduation changed jobs by the fifth year of their careers, often to go into management or administration.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a rising but below average unemployment rate. Their earnings are lower than average and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as finance and insurance clerks and in retail sales than as financial officers or administrators. The stable labour market conditions for the former occupations follow from the fact that they are concentrated in the finance, insurance and real estate, and retail sales industries which are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: C16.  
Vol. 1 Occupations Cross-index: 062, 122, 623, 642.

## Work Prospects

1995 to 2000



How will  
labour market  
conditions  
change  
for these  
graduates?



## Retail Sales

Career Program, Community College (2 years)

### Program of Study

This program offers training in retail sales and sales management.

- Retail sales programs are offered at community colleges in every province except Newfoundland, Nova Scotia and New Brunswick.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and a solid grounding in English (French) and mathematics.

### Full-Time Earnings

1992

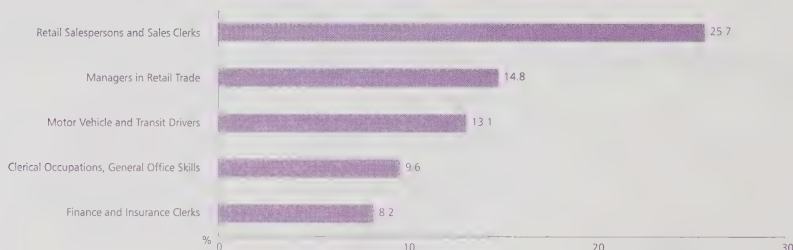


of Graduates\*

\*Full-time earnings at the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	37%	74%
Are they satisfied with their work?	85%	93%
Does their work directly match their training?	24%	61%
Do they feel overqualified for their work?	74%	34%

## After Graduation

In 1994, 540 students graduated in retail sales. Graduates usually find work as sales clerks or as managers or administrators. They are most often employed in the retail sales sector. Information from various graduate surveys shows that:

- Three out of four graduates found full-time employment, and one out of six found part-time employment; the unemployment rate is just below that of other community college graduates.
- Two years after graduation, full-time earnings are lower than the average for other community college graduates; between two and five years after graduation, income growth is one and a half times faster than the average rate.
- Women account for approximately 73% of graduates, compared with 82% about 10 years ago.
- These graduates often work in the same occupations as management, administration and marketing graduates.
- A large number of graduates change jobs. The majority of those employed as managers or administrators two years after graduation became administrative officers or bookkeepers three years later. Most of the graduates who were employed as salespersons two years after graduation became managers or administrators three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average but rising unemployment rate. Their earnings are lower than average but rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

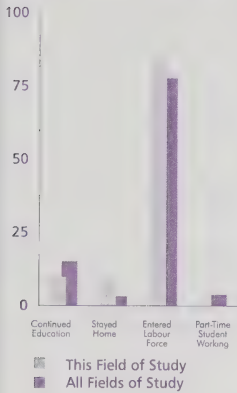
Over the next five years, the labour market situation for these graduates is expected to improve but remain fair.

- New job openings are expected to exceed the number of people with the requisite skills for these jobs. The competition between these graduates and more experienced, but non-employed, workers will be about average.
- These graduates will have more success when searching for employment in wholesale or retail trade than in the clerical field. The improving labour market conditions for the former occupations follow from the fact that the wholesale and retail sales industries are expected to exhibit about average growth over the remainder of the decade.

See also: This Field of Study Code: C18. Related Code: T14.  
Vol. 1 Occupations Cross-index: 062, 641, 642.

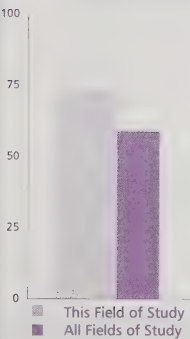
### Where Did They Go?

1992



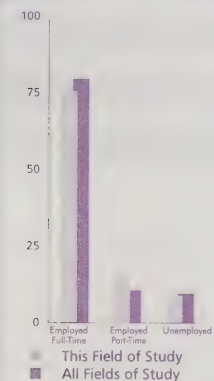
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000





# Secretary - General

Career Program, Community College (2 years)

## Program of Study

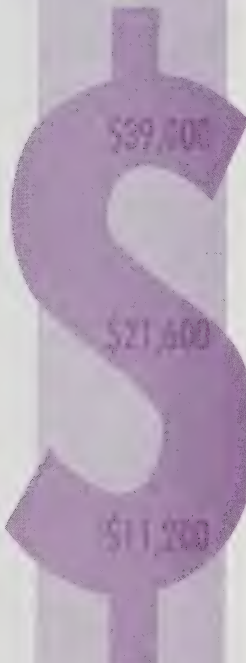
Students learn basic secretarial skills such as keyboarding, shorthand, and clerical and office management.

- This program is offered at community colleges in every province except New Brunswick, Saskatchewan and British Columbia.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and a good command of English (French). They must also pass an English (French) proficiency test and meet established typing and shorthand standards. Some institutions also require applicants to pass an interview.

## Full-Time Earnings

1992

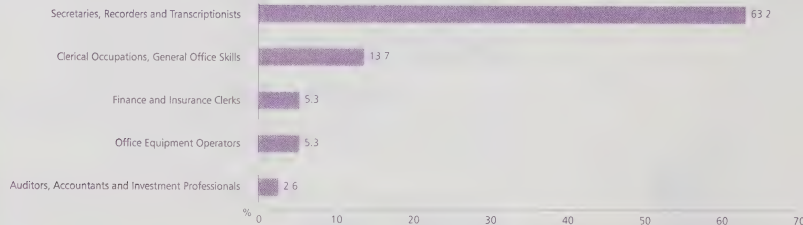


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	67%	74%
Are they satisfied with their work?	97%	93%
Does their work directly match their training?	55%	61%
Do they feel overqualified for their work?	53%	34%



## After Graduation

In 1994, 2,740 students graduated from this type of program. The majority found work as secretaries. Others were employed in clerical occupations. These graduates are usually employed in financial and realty institutions. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is slightly lower than for other community college graduates.
- Two years after graduation, full-time earnings are much lower than the average for other community college graduates but, between two and five years after graduation, increase at a somewhat faster rate.
- Women account for approximately 99% of graduates, the same rate as about 10 years ago.
- Graduates sometimes work with management and administration graduates from university and community college.
- Not many graduates change jobs. Most of those employed as secretaries two years after graduation were in the same positions three years later, although some found work as clerks, administrative officers or managers. There is greater mobility among clerical employees. Five years after graduation, many of them were secretaries.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a below average but rising unemployment rate. Their earnings are lower than average but rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

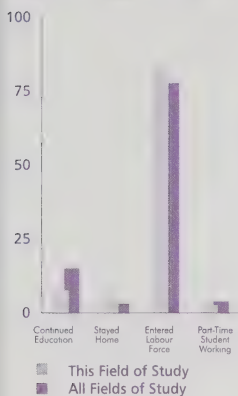
Over the next five years, the labour market situation for these graduates is expected to worsen yet remain fair.

- While new job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase slightly. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more success when searching for employment as data entry clerks or finance and insurance clerks than as secretaries and word processors. These graduates are concentrated in the finance and insurance sectors which are expected to exhibit average growth over the remainder of the decade. Employment opportunities will be hurt by advances in computer technology. Students in this area should make every effort to acquire and enhance their computer skills.

See also: This Field of Study Code: C110. Related Code: T16.  
Vol. 1 Occupations Cross-index: 124, 141, 142, 143.

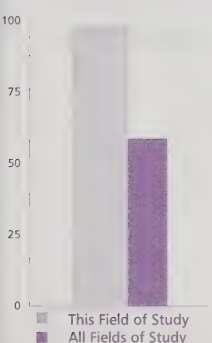
### Where Did They Go?

1992



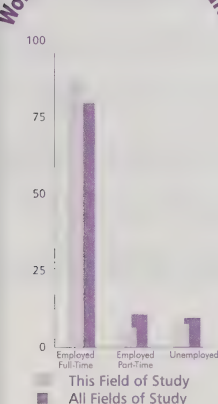
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?





# Secretary - Legal

Career Program, Community College (2 years)

## Program of Study

Students gain basic secretarial skills such as keyboarding, shorthand, and clerical and office management, as well as the legal knowledge necessary to work as a law clerk or court reporter.

- This program is offered at community colleges in every province except Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have completed high school and have a good command of English (French). They must also pass a proficiency test in English (French) and meet established typing and shorthand standards. Some institutions also require an interview.

## Full-Time Earnings

1992

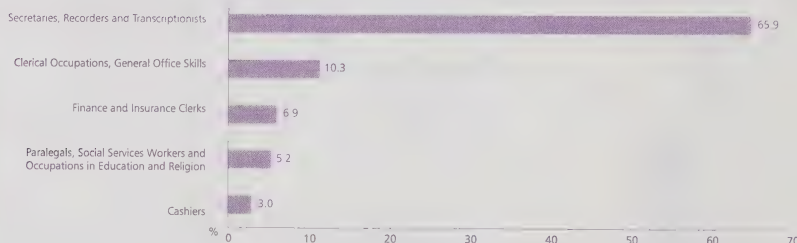


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	62%	74%
Are they satisfied with their work?	95%	93%
Does their work directly match their training?	48%	61%
Do they feel overqualified for their work?	36%	34%

## After Graduation

In 1994, 980 students graduated as legal secretaries. Most graduates find positions as legal secretaries in law offices. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate is also similar to that for other community college graduates.
- Two years after graduation, full-time earnings are lower than the average for other community college graduates but, between two and five years after graduation, increase at an above average rate.
- Women account for approximately 95% of graduates, compared with 100% about 10 years ago.
- These graduates often find work in the same occupations as graduates from general secretarial programs or, in some cases, with graduates from protection and corrections programs.
- Not many graduates change jobs. The majority of graduates working as shorthand typists two years after graduation are in the same field three years later. Most graduates working as legal secretaries two years after graduation are in the same positions three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average but rising unemployment rate. Their earnings are lower than average but rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

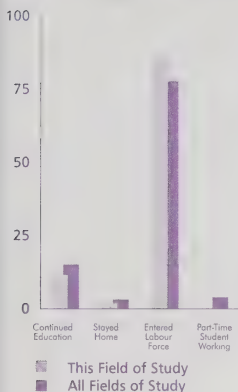
Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While new job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase slightly. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more success when searching for employment as legal secretaries than in the paralegal field. The labour market conditions for the former occupation follows from the fact that it is concentrated in the professional services (law offices) industry which is expected to exhibit about average employment growth over the remainder of the decade. Employment opportunities will be hurt by advances in computer technology. Students should make every effort to acquire and enhance their skills in this area.

**See also:** This Field of Study Code: C111. Related Code: T17.  
Vol. 1 Occupations Cross-index: 124, 141, 142, 411, 421.

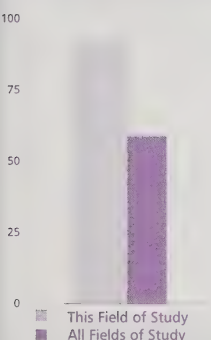
### Where Did They Go?

1992



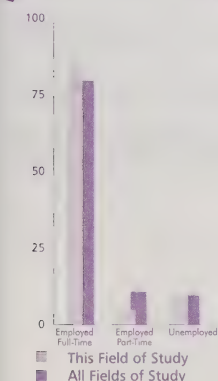
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?



# Secretary - Medical

Career Program, Community College (2 years)

## Program of Study

Students acquire basic secretarial skills such as keyboarding, shorthand and office management, and career-specific skills such as maintaining medical and health records.

- This program is offered at community colleges in every province except Newfoundland and New Brunswick.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and a good command of English (French). They must also pass a proficiency test in English (French), meet established standards in typing and shorthand, and undergo an interview and medical examination.

## Full-Time Earnings

1992

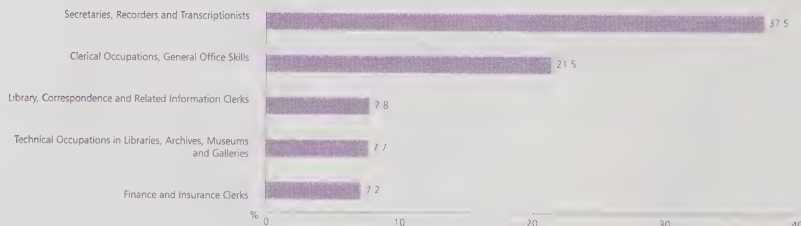


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	63%	74%
Are they satisfied with their work?	98%	93%
Does their work directly match their training?	79%	61%
Do they feel overqualified for their work?	26%	34%



## After Graduation

In 1994, 510 students graduated from medical secretary programs. Most found work as secretaries and some as filing clerks. Graduates are usually employed in the hospital services sector. Information from various graduate surveys shows that:

- Less than four out of five graduates found full-time employment, and one out of 15 found part-time employment; the unemployment rate for these graduates is higher than for other community college and secretarial graduates.
- Two years after graduation, full-time earnings are slightly lower than the average for other community college graduates; between two and five years after graduation, income growth is very slow.
- Women account for approximately 99% of graduates, the same rate as about 10 years ago.
- These graduates often find jobs in the same occupations as graduates from other secretarial programs.
- Not many graduates change jobs. The majority of those employed as secretaries two years after graduation are in the same positions three years later. Mobility is much higher among graduates who are working as receptionists two years after graduation; three years later, many of them are employed as secretaries.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average and rising unemployment rate. Their earnings are average but declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

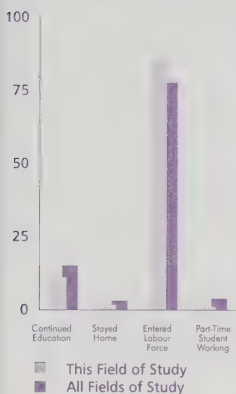
Over the next five years, the labour market situation for these graduates is expected to worsen yet remain poor.

- While new job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase slightly. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more success when searching for employment as medical clerks or librarians than as medical secretaries. The worsening labour market conditions for the latter occupation follow from the fact that it is concentrated in the professional services (doctor's offices) and insurance sectors of the economy which are expected to exhibit weak growth over the remainder of the decade.

See also: This Field of Study Code: C112. Related Code: T18.  
Vol. 1 Occupations Cross-index: 124, 141, 143, 145, 521.

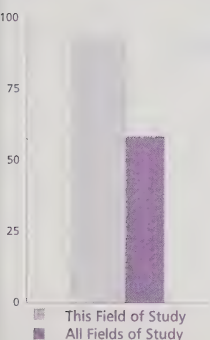
### Where Did They Go?

1992



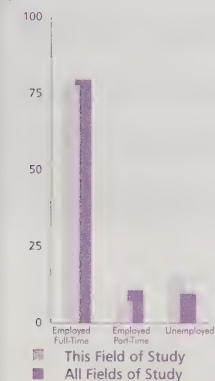
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?





# Financial Management - Accounting

Trade/Vocational College (7 months)

## Program of Study

Students enrolled in this program learn the fundamentals of accounting and small business management.

- Accounting is offered at institutions in every province.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

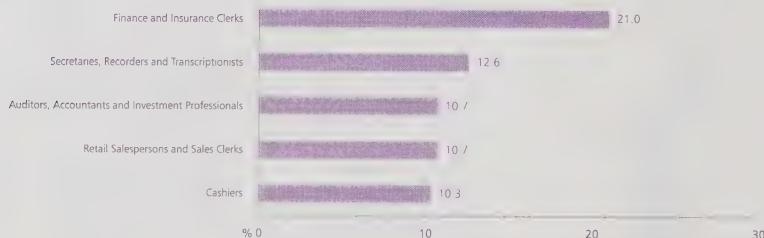


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,100 is the average for all fields of study at this level.

## Occupations of Graduates

1992



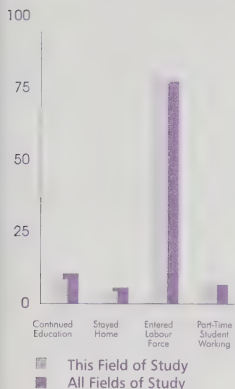
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	71%	74%
Are they satisfied with their work?	92%	92%
Does their work directly match their training?	40%	47%
Do they feel overqualified for their work?	43%	36%

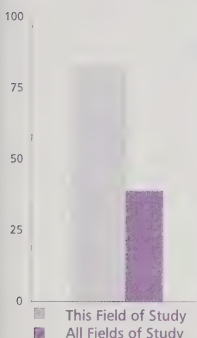
## Where Did They Go?

1992



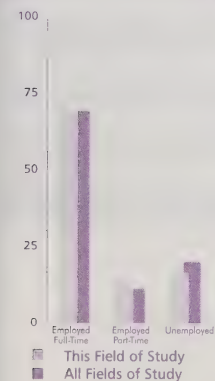
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,010 students received a diploma in accounting from a trade/vocational college. They found employment in a wide range of fields. Some work as accounting or pay clerks, others are in sales or administration. Graduates are usually employed in the retail sales industry. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and more than one out of 10 found part-time employment; the unemployment rate for these graduates is below the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are lower than the average for other trade/vocational graduates and increase at about the average rate over the next three years.
- Women account for approximately 83% of graduates, compared with 74% about 10 years ago.
- These graduates often find work in the same occupations as graduates from other business related courses at the postsecondary level.
- Relatively few graduates change jobs. The majority of those employed as accounting clerks two years after graduation are in the same jobs three years later, although some have found jobs in administration.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are stable but low relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as financial and insurance clerks and as retail salespersons than as investment professionals or financial officers. These occupations are concentrated in the finance, insurance and real estate and retail trade industries, which are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: T11. Related Code: C11.  
Vol. 1 Occupations Cross-index: 111, 122, 123, 141, 143.

## Work Prospects

1995 to 2000



# Management and Administration - Business and Commerce

Trade/Vocational College (7 months)

## Program of Study

Students enrolled in this program study basic management skills, bookkeeping and retail sales.

- It is offered in every province except Newfoundland.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

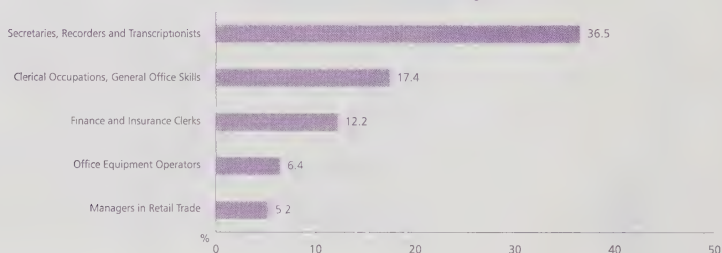


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

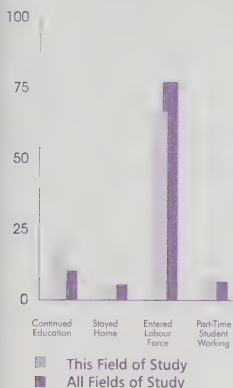
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	76%	74%
Are they satisfied with their work?	93%	92%
Does their work directly match their training?	47%	47%
Do they feel overqualified for their work?	40%	36%



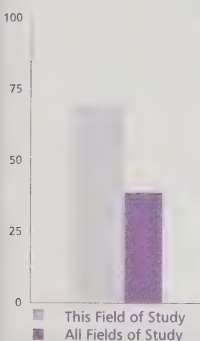
## Where Did They Go?

1992



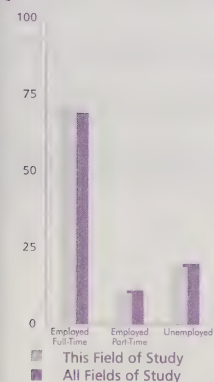
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 660 students received a diploma in business and commerce from a trade/vocational college. Graduates often found jobs as secretaries, clerks, bookkeepers or administrators. These graduates work in many fields and are often found in the business service industry. Information from various graduate surveys shows that:

- More than seven out of 10 graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is similar to that for other trade/vocational graduates.
- Two years after graduation, full-time earnings are about the same as for other trade/vocational graduates and increase at about the average rate for the next three years.
- Women account for approximately 69% of graduates, the same rate as about 10 years ago.
- These graduates often enter the same occupations as graduates from other business related courses at postsecondary institutions.
- A fairly significant number of graduates change jobs. Most individuals are employed as shorthand typists two years after graduation and are working in managerial occupations three years later. Many of the graduates employed as bookkeepers or accounting clerks become administrators three to five years after graduation.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are average but rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment in clerical or administrative occupations than when seeking employment as office machine operators, cashiers or retail salespersons. These graduates are concentrated in the finance, insurance and real estate and retail trade industries which are expected to exhibit average growth over the remainder of the decade.

**See also:** This Field of Study Code: T12. Related Code: C14.  
Vol. 1 Occupations Cross-index: 062, 111, 122, 123, 143.

## Work Prospects

1995 to 2000





# Retail Sales

Trade/Vocational College (7 months)

## Program of Study

Students learn the fundamentals of retail sales and sales management.

- This program is offered in every province except Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick and Quebec.

**Prerequisites:** The requirements for admission vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma and a solid background in English (French) and mathematics. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

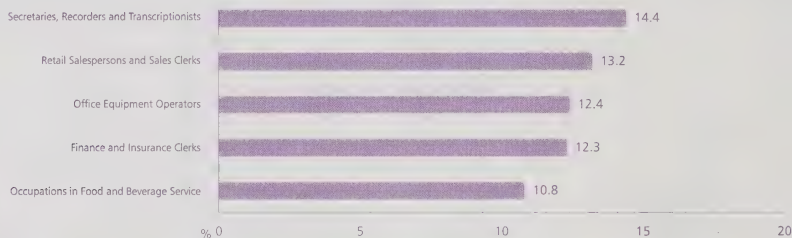


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



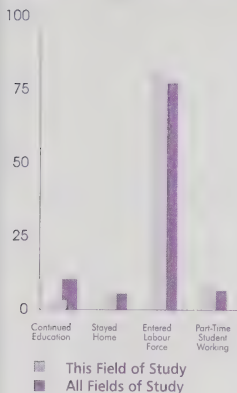
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	50%	74%
Are they satisfied with their work?	89%	92%
Does their work directly match their training?	35%	47%
Do they feel overqualified for their work?	49%	36%

## Where Did They Go?

1992



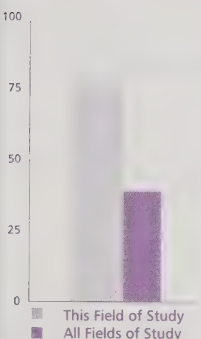
## After Graduation

In 1994, 140 students received a diploma in retail sales from a trade/vocational college. Graduates found employment in a range of fields. Only a few work directly in sales. Others are employed in food preparation and clerical occupations. Information from various graduate surveys shows that:

- Two thirds of graduates found full-time employment, and less than one out of five found part-time employment; the unemployment rate for these graduates is below the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are well below the average for other trade/vocational graduates but increase at about the average rate for the next three years.
- Women account for approximately 76% of graduates, compared with 65% about 10 years ago.
- These graduates often enter the same occupations as graduates from a variety of fields of study.
- Relatively few graduates change jobs. Some of those employed in sales two years after graduation become shippers three to five years later, but most stay in the same jobs.

## Percentage of Women

1994



## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

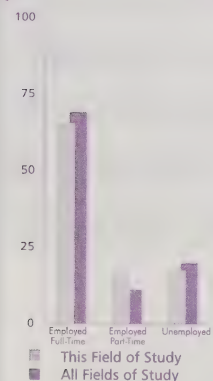
- Recent graduates from this field of study have had a below average unemployment rate. Their earnings are low and stable relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to get better yet remain fair.

- Job openings are expected to increase more rapidly than the number of people with the requisite skills for these jobs. The competition between these graduates and more experienced, but non-employed, workers will be about the same as in the past.
- These graduates will have more difficulty when searching for employment in clerical occupations than as salespersons or cashiers. The improving labour market conditions for the latter occupations follow from the fact that they are concentrated in the retail trade industry which is expected to exhibit average growth over the remainder of the decade.

## Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?

See also: This Field of Study Code: T14. Related Code: C18.  
Vol. 1 Occupations Cross-index: 642, 645, 661, 664.



# Secretary - Accounting and Bookkeeping

Trade/Vocational College (10 months)

## Program of Study

Students receive secretarial training with an emphasis on accounting and bookkeeping skills.

- This program is offered in every province except Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick and Alberta.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

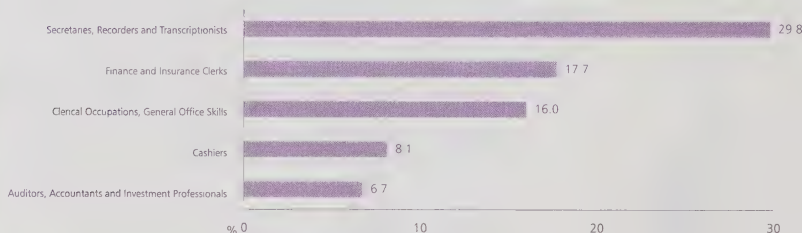


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,300 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

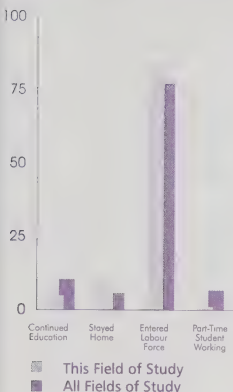
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	74%	74%
Are they satisfied with their work?	95%	92%
Does their work directly match their training?	41%	47%
Do they feel overqualified for their work?	38%	36%



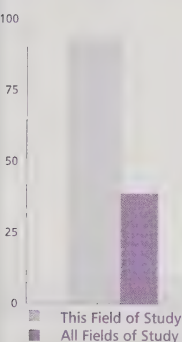
## Where Did They Go?

1992



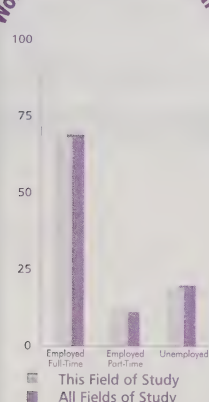
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 200 students received a diploma in this field from a trade/vocational college. Many graduates found employment as secretaries or bookkeepers, although some were also employed as clerical workers. Graduates work in many different fields but are most often employed in the retail trade industry. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and one out of eight found part-time employment; the unemployment rate for these graduates is about the same as for other trade/vocational graduates.
- Two years after graduation, full-time earnings are well below the average for other trade/vocational graduates and increase at half the average rate over the next three years.
- Women account for approximately 93% of graduates, compared with 89% about 10 years ago.
- These graduates often enter the same occupations as other secretarial, business and accounting graduates.
- A large number of graduates change jobs. Many of those employed as bookkeepers become clerical workers or salespersons three to five years after graduation. In addition, many graduates employed as secretaries become clerical workers or accounting clerks three to five years after graduation.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is also expected to decline. The competition among these graduates will be strong.
- These graduates will have more difficulty when searching for employment as recorders and transcribers and in audit accounting occupations than as financial and insurance clerks, cashiers and in general clerical occupations. These occupations are concentrated in the finance and insurance and retail trade industries which are expected to exhibit strong growth over the remainder of the decade.

**See also:** This Field of Study Code: T15. Related Codes: C11, T11.  
Vol. 1 Occupations Cross-index: 122, 123, 124, 141, 143.

## Work Prospects

1995 to 2000







# Secretary - General

Trade/Vocational College (6 months)

## Program of Study

Students receive training in keyboarding, filing and general office management.

- This program is offered in every province except Prince Edward Island.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

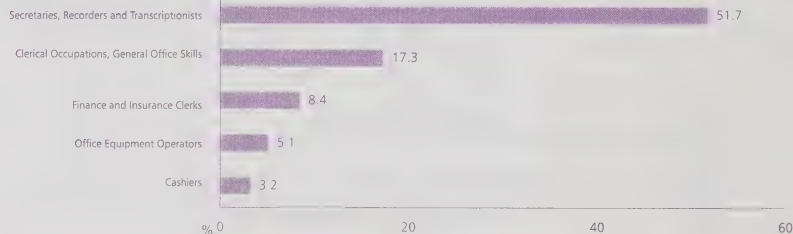


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



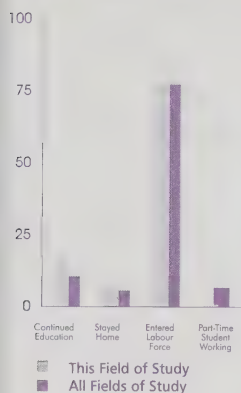
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	75%	74%
Are they satisfied with their work?	93%	92%
Does their work directly match their training?	55%	47%
Do they feel overqualified for their work?	30%	36%

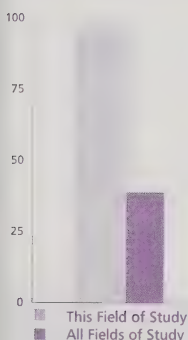
## Where Did They Go?

1992



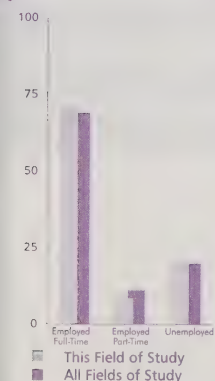
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 3,400 students received a diploma in this field of study. Most found employment as secretaries. Some are employed in clerical or administrative occupations. These graduates work in a variety of sectors but are often employed in the public service. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and less than one out of 10 found part-time employment; the unemployment rate for these graduates is about the same as for other trade/vocational graduates.
- Two years after graduation, full-time earnings are below the average for other trade/vocational graduates but increase at slightly above the average rate for the next three years.
- Women account for approximately 98% of graduates, compared with 94% about 10 years ago.
- These graduates often enter the same occupations as other secretarial graduates at the community college and trade/vocational levels of study.
- Relatively few graduates change jobs. The majority of those employed as secretaries two years after graduation are in the same field three years later. Most of the graduates employed as bookkeepers two years after graduation work in management or administration three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are low but rise slightly relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to be about the same. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as general secretaries or general office clerks than as office equipment operators. These graduates are concentrated in the business services and education industries which are expected to exhibit average growth over the remainder of the decade.

**See also:** This Field of Study Code: T16. Related Code: C110.  
Vol. 1 Occupations Cross-index: 124, 141, 142, 143.

## Work Prospects

1995 to 2000





# Secretary - Legal

## Trade/Vocational College (8 months)

### Program of Study

Students receive basic training in secretarial work focussing on legal matters, law clerking and court reporting.

- This program is offered in every province.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

### Full-Time Earnings

1992

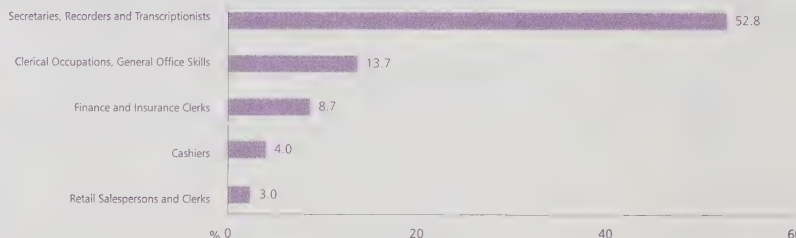


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

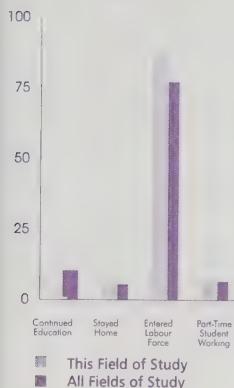
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	80%	74%
Are they satisfied with their work?	97%	92%
Does their work directly match their training?	61%	47%
Do they feel overqualified for their work?	43%	36%



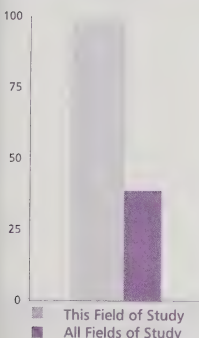
## Where Did They Go?

1992



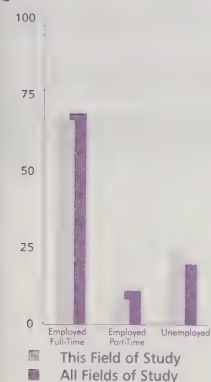
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 70 students graduated as legal secretaries from a trade/vocational college. Most found jobs as secretaries. Some are employed as bookkeepers or clerical employees. Most graduates are employed in the business or professional service industry. Information from various graduate surveys shows that:

- Two out of three graduates found full-time employment, and less than one out of 10 found part-time employment; the unemployment rate for these graduates is higher than the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are below the average for other trade/vocational graduates but increase at one and a half times the average rate over the next three years.
- Women account for approximately 98% of graduates, compared with 100% about 10 years ago.
- These graduates often find work in the same occupations as graduates from other secretarial and business programs.
- Very few graduates change jobs. The majority of those employed as secretaries two years after graduation are in the same field three years later. Some of the graduates employed as clerical workers two years after graduation become bookkeepers three to five years after graduation.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are low relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen yet remain poor.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to remain constant or increase slightly. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment in the secretarial and general clerical fields than in sales, finance and insurance. The better labour market conditions for occupations in the latter group follow from the fact that they are concentrated in the retail sales and finance, insurance and real estate industries. These industries are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: T17. Related Code: C111.  
Vol. 1 Occupations Cross-index: 124, 141, 142, 143.

## Work Prospects

1995 to 2000







# Secretary - Medical

Trade/Vocational College (8 months)

## Program of Study

Students learn the basics of secretarial work with an emphasis on medical and health records technology.

- This program is offered in every province except Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

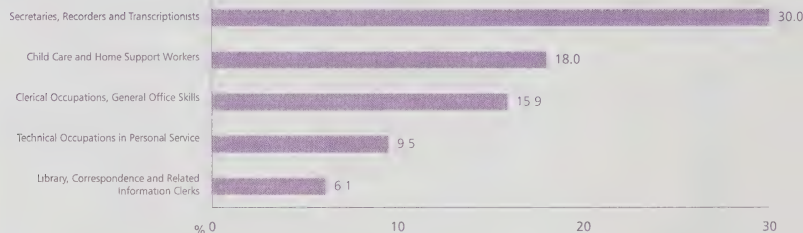


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



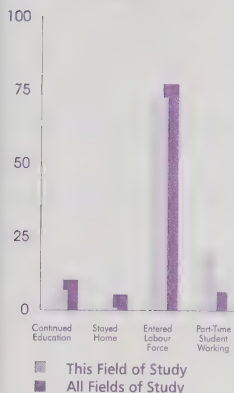
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	63%	74%
Are they satisfied with their work?	95%	92%
Does their work directly match their training?	32%	47%
Do they feel overqualified for their work?	12%	36%

## Where Did They Go?

1992



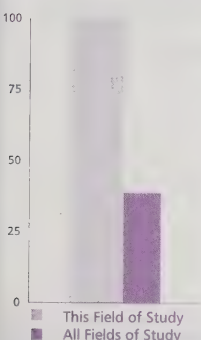
## After Graduation

In 1994, 160 students graduated as medical secretaries from a trade/vocational college. Some found employment as secretaries and others as clerks. These graduates are employed mainly in the health and social services sector. Information from various graduate surveys shows that:

- Only three out of five graduates found full-time employment, and one out of three found part-time employment; the unemployment rate for these graduates is half the average rate for other trade/vocational graduates.
- Two years after graduation, full-time earnings are much lower than the average for other trade/vocational graduates but increase at an above average rate for the next three years.
- Women account for approximately 100% of graduates, the same rate as about 10 years ago.
- These graduates often enter the same occupations as other secretarial, business and library and records graduates.
- Aside from the individuals employed as secretaries, a significant number of graduates change jobs. Most of those employed as correspondence clerks become administrators three to five years after graduation. Many of those employed as clerical workers find jobs in personal services occupations three to five years after graduation.

## Percentage of Women

1994



## Work Prospects

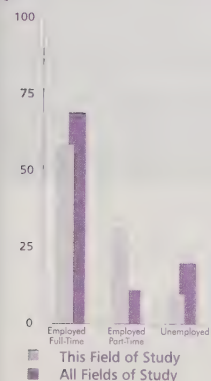
Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a significantly lower than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training and education.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

## Work Life of Recent Graduates

1992



See also: This Field of Study Code: T18. Related Code: C112.  
Vol. 1 Occupations Cross-index: 124, 141, 143, 145, 146.

## Work Prospects

1995 to 2000





# Secretary - Word Processing

Trade/Vocational College (6 months)

## Program of Study

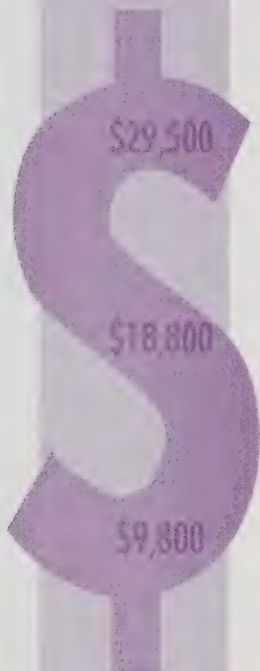
Students receive specialized secretarial training in the use of word processing packages and basic computer operation.

- This program is offered in every province except Prince Edward Island, Nova Scotia and Manitoba.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

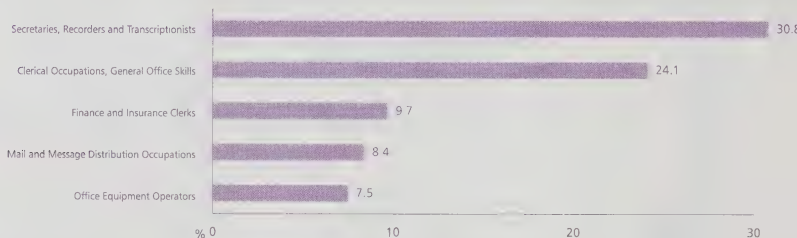


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

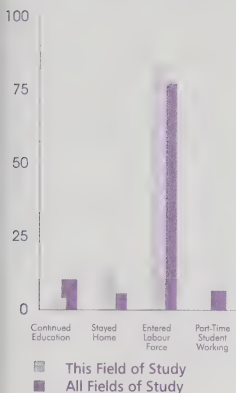
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	83%	74%
Are they satisfied with their work?	92%	92%
Does their work directly match their training?	61%	47%
Do they feel overqualified for their work?	18%	36%



## Where Did They Go?

1992



## After Graduation

In 1994, 120 students received a diploma in this field from a trade/vocational institution. Some found work as secretaries and others as receptionists or clerical workers. These graduates are often employed in the public service. Information from various graduate surveys shows that:

- Three out of five graduates found full-time employment, and one out of seven found part-time employment; the unemployment rate for these graduates is well above the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are well below the average for other trade/vocational graduates but increase at an above average rate over the next three years.
- Women account for approximately 97% of graduates, compared with 90% about 10 years ago.
- These graduates often enter the same occupations as other secretarial, business and computer science graduates.
- The majority of graduates are employed as secretaries and few of them change jobs. Five years after graduation, some are working as administrators. However, the majority of graduates working as office equipment operators change jobs three to five years after graduation. Some enter management or administration, and others find work as secretaries or accounting clerks.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to remain about the same. The competition among these graduates will be strong.
- These graduates will have more difficulty when searching for employment as general secretaries and general office clerks than as office equipment operators or finance and insurance clerks. These occupations are concentrated in the personal services and business and financial industries, which are expected to exhibit about average growth over the remainder of the decade.

**See also:** This Field of Study Code: T110.  
Vol. 1 Occupations Cross-index: 124, 141, 142, 143, 145.

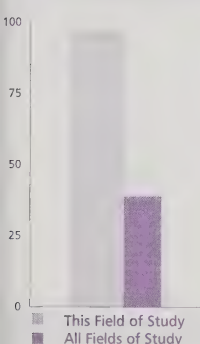
## Work Prospects

1995 to 2000



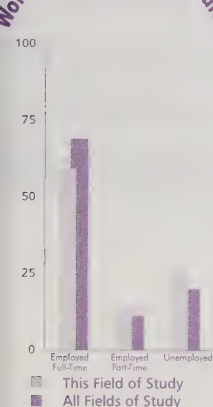
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Education - Non-Teaching

Master's University (2 years)

## Program of Study

Students specialize in such areas as teacher librarianship, educational administration, educational psychology, guidance and counselling, and educational measurement and evaluation.

- This program is not offered in Prince Edward Island, New Brunswick, Manitoba or Alberta.
- Some universities offer a short program leading to a certificate or a graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours degree in education or a related discipline. An interview and letters of recommendation are also required.

## Full-Time Earnings

1992



of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



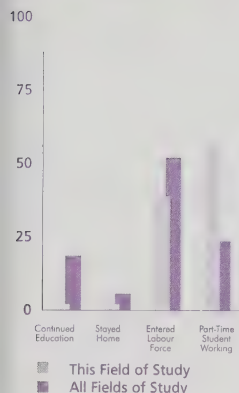
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	83%	83%
Are they satisfied with their work?	96%	95%
Does their work directly match their training?	74%	69%
Do they feel overqualified for their work?	67%	57%

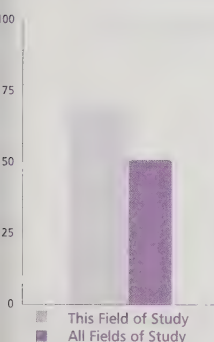
## Where Did They Go?

1992



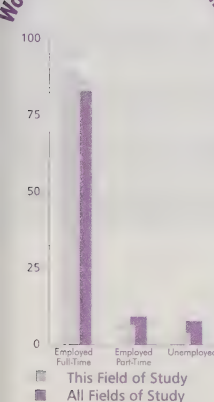
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,980 students received a master's degree in education (non-teaching). Most graduates are employed as elementary or secondary school teachers. Some are guidance counsellors or administrators. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is much lower than for other master's graduates.
- Two years after graduation, full-time earnings are well above the average for other master's graduates but increase at about the average rate for the next three years.
- Women account for approximately 70% of graduates, compared with 51% about 10 years ago.
- These graduates usually enter the same occupations as other educational graduates at the undergraduate and master's level.
- A relatively significant number of graduates change jobs. While the majority of graduates employed as elementary or secondary teachers two years after graduation are in the same jobs three years later, many have become administrators. Two years after graduation, not many graduates working in administrative occupations have changed jobs. The few who have changed jobs by the five-year mark of their careers have usually gone into teaching.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen from good to fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers, counsellors and college and vocational instructors than as educational administrators, policy and program officers and child care and home support workers. The labour market conditions for these occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: M21. Related Code: U21.  
Vol. 1 Occupations Cross-index: 001, 413, 414, 416, 647.

## Work Prospects

1995 to 2000





# Elementary/Secondary Teacher Training

Master's University (1 or 2 years)

## Program of Study

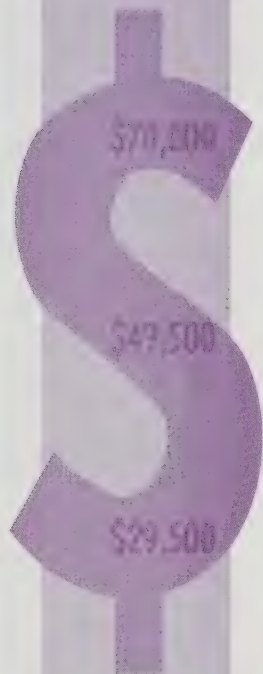
Students receive teacher training in such disciplines as art, music, commercial education, specialized education, home economics, adult education and continuing education.

- This program is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or a graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in teaching or a related discipline. An interview and letters of recommendation are also required.

Full-Time Earnings

1992

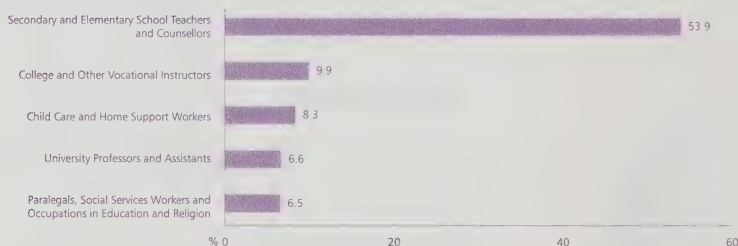


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

Occupations of Graduates

1992



Graduates Speak Out

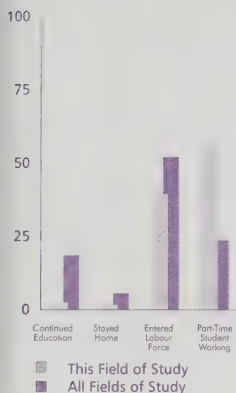
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	88%	83%
Are they satisfied with their work?	96%	95%
Does their work directly match their training?	77%	69%
Do they feel overqualified for their work?	71%	57%



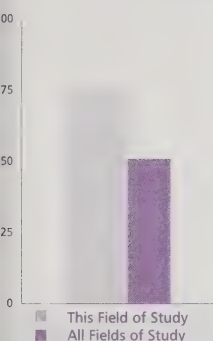
## Where Did They Go?

1992



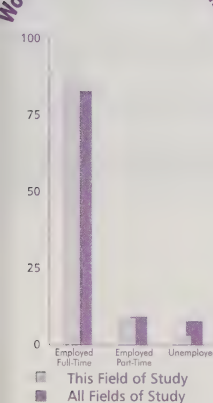
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,120 students received a master's degree in elementary/secondary teacher training. Most found work in their field and some are employed as policy or program officers. Information from various graduate surveys shows that:

- Nearly nine out of 10 graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is lower than that of other master's graduates.
- Two years after graduation, full-time earnings are higher than the average for other master's graduates, but increase at a below average rate for the next three years.
- Women account for approximately 75% of graduates, compared with 58% about 10 years ago.
- These graduates often enter the same occupations as other educational graduates with an undergraduate or master's degree.
- Few graduates change jobs. Most of those employed as elementary or secondary school teachers two years after graduation are in the same field three years later. Others have become administrators or teach at a higher level. Graduates working as policy or program officers two years after graduation were even less likely to change jobs three years later. Those who did went into teaching.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen from good to fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers, counsellors and university professors and assistants than as child care and home support workers and creative and performing artists. The labour market conditions for the former group of occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: M22. Related Code: U22.  
Vol. 1 Occupations Cross-index: 001, 412, 413, 414, 647.

## Work Prospects

1995 to 2000







# Physical Education

Master's University (1 or 2 years)

## Program of Study

This program leads to various specializations, such as kinesiology, human kinetics, kinanthropology, recreation and physical education.

- It is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or a graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in physical education or a related discipline. Applicants must also pass an interview, provide letters of recommendation and demonstrate their proficiency in their chosen sport.

## Full-Time Earnings

1992

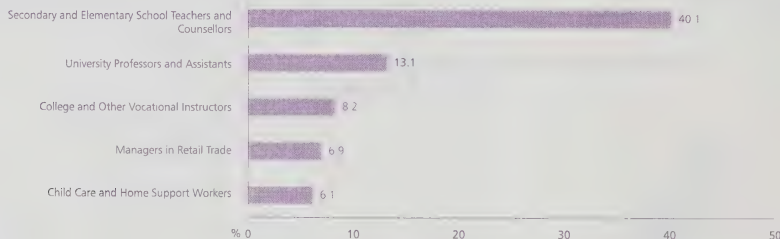


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



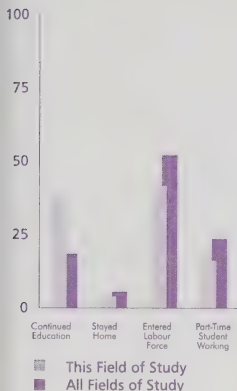
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	60%	83%
Are they satisfied with their work?	84%	95%
Does their work directly match their training?	57%	69%
Do they feel overqualified for their work?	82%	57%

## Where Did They Go?

1992



## After Graduation

In 1994, 270 students received a master's degree in physical education. They found employment in a variety of fields. Some work in social services or as athletes and coaches; others are teachers or are employed in the private sector. Most graduates are employed in education. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and more than one out of 10 found part-time employment; the unemployment rate for these graduates is about the same as for other master's graduates.
- Two years after graduation, full-time earnings are well below the average for other master's graduates but increase at about the average rate for the next three years.
- Women account for approximately 56% of graduates, compared with 40% about 10 years ago.
- These graduates usually enter the same occupations as other educational graduates at the undergraduate and master's level.
- Very few graduates employed in teaching change jobs; however, almost all the graduates employed as administrators entered managerial or other occupations three to five years after graduation.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen from fair to poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers, counsellors, coaches and referees and in social service occupations than as child care and home support workers and retail sales managers. The poor labour market conditions for the former group of occupations follow from the fact that they are concentrated in the education, health and social services industries which are expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: M23. Related Code: U23.  
Vol. 1 Occupations Cross-index: 001, 413, 414, 416, 647.

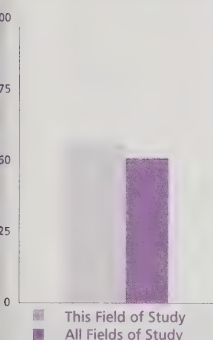
## Work Prospects

1995 to 2000



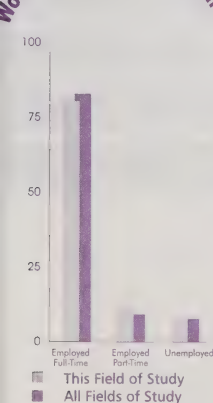
## Percentage of Women

1994



## Work Life of Recent Graduates

1992





# Teaching - Other

Master's University (2 years)

## Program of Study

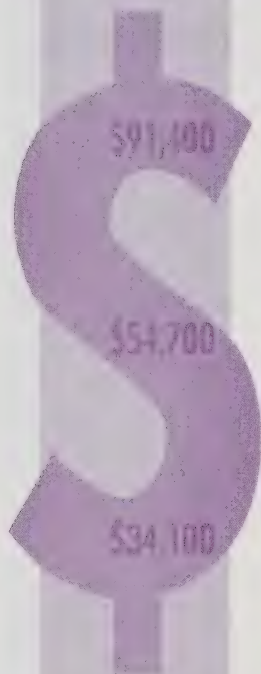
Students receive teacher training for the postsecondary level as well as kindergarten and preschool levels.

- This program is offered at universities in every province except Prince Edward Island.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in teaching or a related discipline, pass an interview and provide letters of recommendation. Teaching experience is an asset.

## Full-Time Earnings

1992

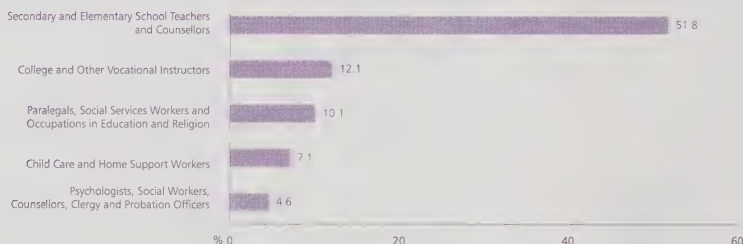


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

### THIS FIELD OF STUDY

### ALL FIELDS OF STUDY

Would they make the same educational choice again?

85%

83%

Are they satisfied with their work?

100%

95%

Does their work directly match their training?

76%

69%

Do they feel overqualified for their work?

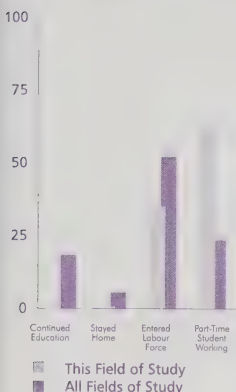
74%

57%



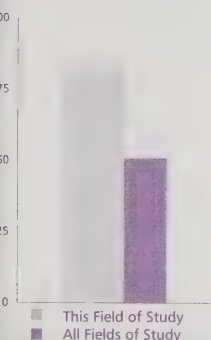
## Where Did They Go?

1992



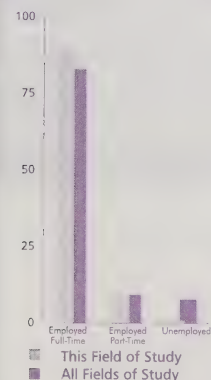
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 350 students received a master's degree in this program. Most found work in their field, usually at the elementary or secondary levels. Many graduates also teach in cegeps. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time employment and one out of 10 found part-time employment; there is virtually no unemployment among these graduates.
- Two years after graduation, full-time earnings are much higher than the average for other master's graduates but increase at only half the average rate for the next three years.
- Women account for approximately 84% of graduates, compared with 59% about 10 years ago.
- These graduates usually enter the same occupations as other educational graduates at the undergraduate and master's level.
- Few graduates change jobs. The majority of those teaching two years after graduation are in the same jobs three years later. The same is true for those in administrative occupations two years after graduation. Three years later, the majority are in the same jobs.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair to good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their earnings are high but declining relative to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become fair to poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers, counsellors, college and vocational instructors than as child care and home support workers and creative and performing artists. The poor labour market conditions for the former group of occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: M24. Related Code: U24.  
Vol. 1 Occupations Cross-index: 001, 413, 414, 416, 647.

## Work Prospects

1995 to 2000







# Education - Non-Teaching

Undergraduate University (3 years)

## Program of Study

Persons in this field of education specialize in educational measurement and evaluation, education psychology, guidance and counselling.

- This program is offered at major universities in all provinces.
- Students with relevant experience in a related field are directly eligible for a one- or two-year program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed high school with high marks in mathematics, biology and social sciences. Quebec students must have a Diploma of Collegial Studies with courses in mathematics, biology and psychology.

## Full-Time Earnings

1992

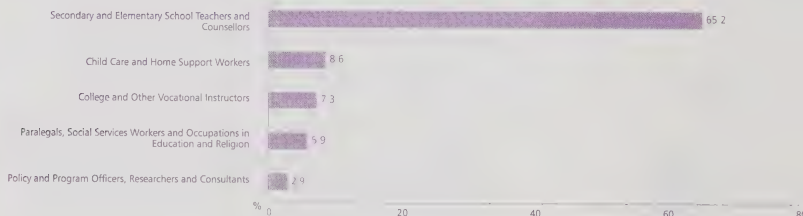


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



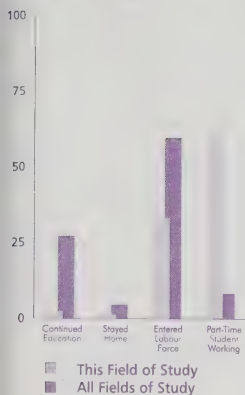
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	76%	71%
Are they satisfied with their work?	100%	91%
Does their work directly match their training?	71%	57%
Do they feel overqualified for their work?	21%	28%

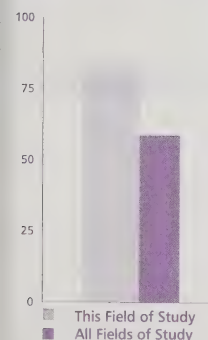
## Where Did They Go?

1992



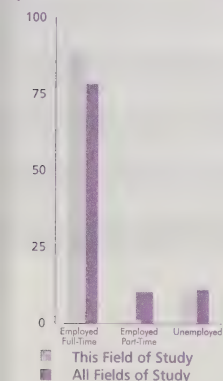
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,360 students graduated in education (non-teaching). Most of those employed full-time found jobs in their field. Information from various graduate surveys shows that:

- Nine out of 10 graduates found work, usually full-time; their unemployment rate is very close to the rate for other graduates at this level.
- Two years after graduation, average earnings are significantly higher than those of other graduates at this level; but, between two and five years after graduation, income growth is slightly below average.
- Women account for approximately 82% of graduates, compared with 67% about 10 years ago.
- These graduates often enter the same occupations as graduates from similar fields of study at the master's or community college level and as graduates from the psychology field of study.
- Very few graduates change jobs. Almost all of those who are employed in education two years after graduation are in the same field three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their relative earnings are increasing and are higher than the average earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers, counsellors and college and vocational instructors than as child care and home support workers. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: U21. Related Code: M21.  
Vol. 1 Occupations Cross-index: 031, 413, 414, 415, 647.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?



# Elementary/Secondary Teacher Training

Undergraduate University (3 or 4 years)

## Program of Study

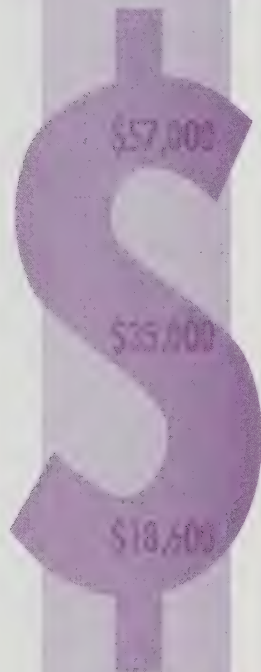
This program provides very general training in teaching such subjects as art, music, history, etc.

- Most Canadian universities offer this program.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must generally have a previous undergraduate degree and a high school diploma (Diploma of Collegial Studies in Quebec). Admission requirements vary depending on the specialty chosen. For example, an applicant must have a solid background in art to become an art teacher.

## Full-Time Earnings

1992

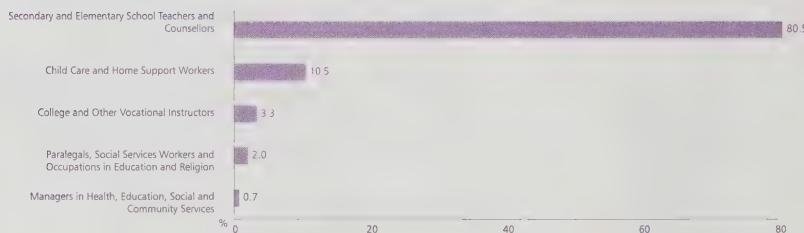


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

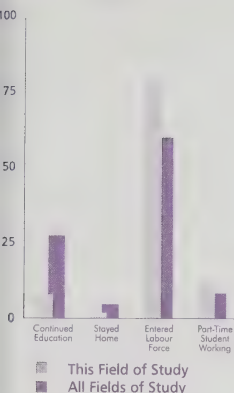
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	84%	71%
Are they satisfied with their work?	96%	91%
Does their work directly match their training?	81%	57%
Do they feel overqualified for their work?	12%	28%



## Where Did They Go?

1992



## After Graduation

In 1994, 16,570 students graduated in elementary and secondary teacher training. Most found work in their field. Information from various graduate surveys shows that:

- More than four out of five graduates found full-time work, and one out of 10 found part-time work; the unemployment rate for teaching graduates is much lower than for other graduates at this level.
- Two years after graduation, full-time earnings are higher than the average for other graduates at this level; between two and five years after graduation, income growth is about average.
- Women account for approximately 72% of graduates, compared with 73% about 10 years ago.
- These graduates usually find work in the same occupations as master's graduates from educational fields of study.
- Few graduates change jobs. The majority who are employed as teachers two years after graduation are still teaching three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average but rising unemployment rate. Their relative earnings are rising and are higher than the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and counsellors than as child care and home support workers. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: U22. Related Code: M22.  
Vol. 1 Occupations Cross-index: 031, 412, 413, 414, 647.

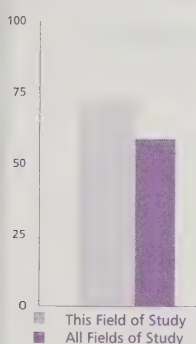
## Work Prospects

1995 to 2000



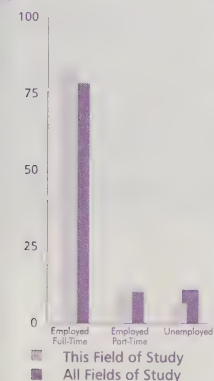
## Percentage of Women

1994



## Work Life of Recent Graduates

1992





# Physical Education

Undergraduate University (4 years)

## Program of Study

This program includes the study of kinanthropology, kinesiology and recreation.

- Physical education programs are offered at major universities in all provinces.
- Some universities offer this degree through a co-op program, which combines work and study.
- Major universities in all provinces offer a one-year program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed high school with high marks in mathematics, biology, chemistry and physics. Quebec students must have a Diploma of Collegial Studies with courses in mathematics, biology and psychology. Applicants must also have an interview and pass a physical fitness test.

## Full-Time Earnings

1992

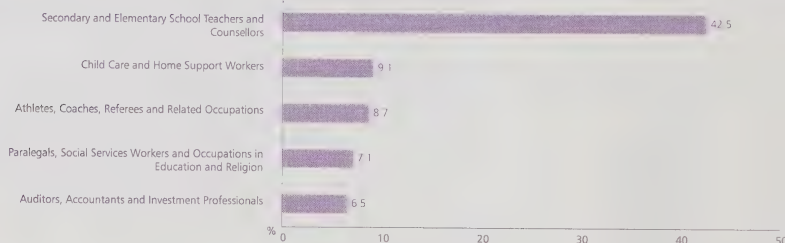


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



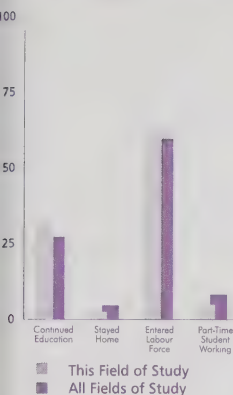
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	70%	71%
Are they satisfied with their work?	94%	91%
Does their work directly match their training?	53%	57%
Do they feel overqualified for their work?	27%	28%

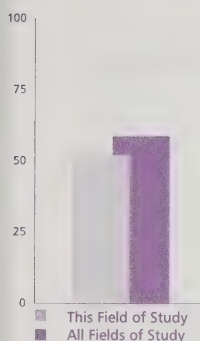
## Where Did They Go?

1992



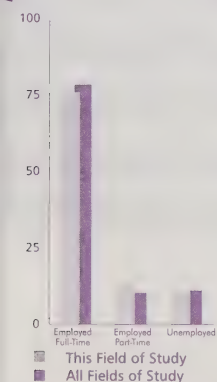
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 3,720 students graduated in physical education. Those who are employed full-time found work in various fields. Many got jobs as teachers, athletes, coaches and referees. However, physical education graduates are usually employed in the education sector. Information from various graduate surveys shows that:

- Three out of four graduates found full-time employment, and more than one out of ten found part-time employment; the unemployment rate for physical education graduates is very close to that for other graduates at this level.
- Two years after graduation, full-time earnings remain relatively lower than the average for other graduates at this level; income growth, between two and five years after graduation, is about average.
- Women account for approximately 52% of graduates, compared with 55% about 10 years ago.
- These graduates often enter the same occupations as graduates from this field of study at the master's level.
- Few graduates employed as teachers change jobs; however, those employed as athletes, coaches or referees two years after graduation, are much more likely to change jobs. Five years into their careers, many have moved on to jobs in community services or teaching.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average but rising unemployment rate. Their relative earnings are rising but are low compared to the average earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers, counsellors, coaches, referees and social service workers than as child care and home support workers. The poor labour market conditions for the former group of occupations follow from the fact that they are concentrated in the education, health and social service industries which are expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: U23. Related Codes: M23, C85. Vol. 1 Occupations Cross-index: 414, 525, 647.

## Work Prospects

1995 to 2000





# Teaching - Other

## Undergraduate University (4 years)

### Program of Study

This program trains people to teach at preschool and postsecondary levels.

- It is offered at major universities in all provinces.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have a high school diploma. Quebec students must have a Diploma of Collegial Studies with courses in the humanities. Most universities require applicants to the preschool education program to have experience working with young children. Applicants to the postsecondary program must have an undergraduate degree or professional experience in their chosen specialty.

### Full-Time Earnings

1992

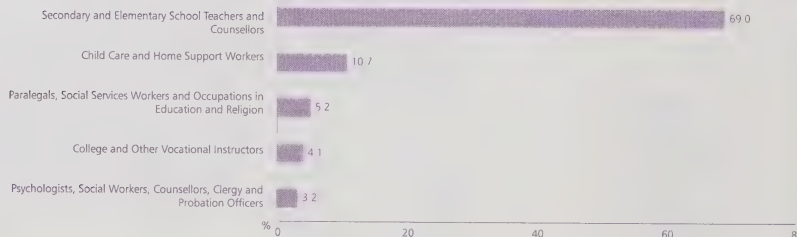


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

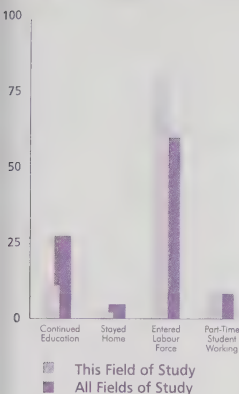
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	75%	71%
Are they satisfied with their work?	96%	91%
Does their work directly match their training?	79%	57%
Do they feel overqualified for their work?	17%	28%



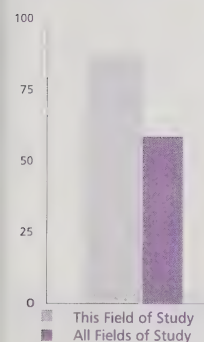
## Where Did They Go?

1992



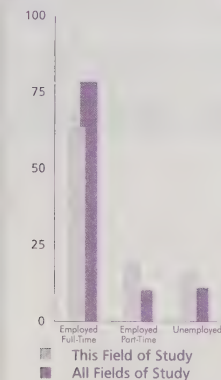
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,220 students received an undergraduate degree in specialized teaching. Most graduates employed full-time found jobs in their field. Information from various graduate surveys shows that:

- Two out of three graduates found full-time work, and one out of five found part-time work. The unemployment rate for these graduates is significantly higher than for other graduates at this level.
- Two years after graduation, full-time earnings are slightly lower than the average for other graduates at this level; and income growth, between two and five years after graduation, is half the average rate.
- Women account for approximately 87% of graduates, compared with 78% about 10 years ago.
- Specialized teaching graduates primarily enter the same occupations as graduates from a similar course at the master's and community college levels.
- Graduates do not tend to change jobs. Almost all of those who are employed as teachers two years after graduation are still teaching three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average and rising unemployment rate. Their relative earnings are declining and are lower than the average earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen to become poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and counsellors than as child care and home support workers. The poor labour market conditions for the former group of occupations follow from the fact that they are concentrated in the education industry which is expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: U24. Related Codes: M24, C21. Vol. 1 Occupations Cross-index: 412, 413, 414, 647.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?





# Education and Counselling

Career Program, Community College (2 years)

## Program of Study

Education and counselling programs cover early childhood education, adult education, teacher training, counselling and addiction counselling.

- This program is offered at community colleges in every province except Newfoundland, Saskatchewan and British Columbia.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and a good command of English (French). Students must also pass an English (French) proficiency test.

## Full-Time Earnings

1992

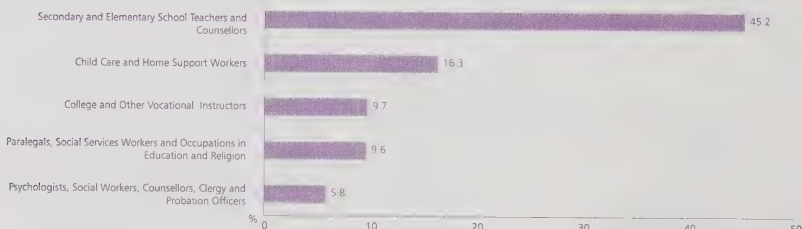


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



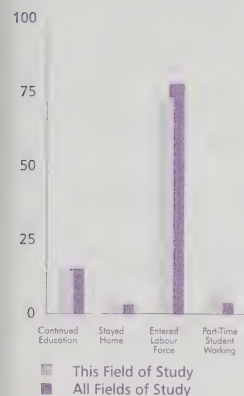
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	84%	74%
Are they satisfied with their work?	97%	93%
Does their work directly match their training?	79%	61%
Do they feel overqualified for their work?	23%	34%

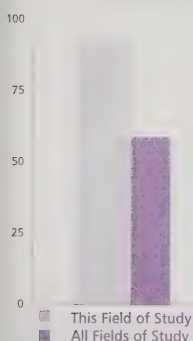
## Where Did They Go?

1992



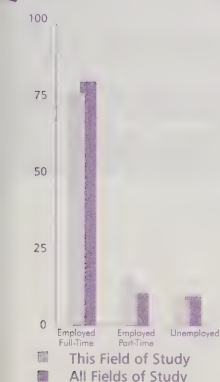
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 3,560 students graduated in education and counselling. Most graduates work in education, primarily as elementary or secondary school teachers. Information from various graduate surveys shows that:

- Three quarters of the graduates found full-time employment and one out of six found part-time employment; the unemployment rate for graduates is slightly lower than for other community college graduates.
- Two years after graduation, full-time earnings are below the average for other community college graduates; between two and five years after graduation, income growth is about average.
- Women account for approximately 92% of graduates, compared with 90% about 10 years ago.
- Graduates working in education sometimes work with social services graduates.
- A fairly high number of graduates change jobs. A high percentage of those employed in elementary and secondary teaching two years after graduation changed jobs three years later; most found positions in personal services. By the same token, some graduates working in personal services two years after graduation found jobs as elementary or secondary school teachers by the fifth year of their careers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a below average but rising unemployment rate. Their earnings are lower than average but rising relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a faster pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more success when searching for employment as child care workers than as teachers or counsellors. The worsening labour market conditions for the latter occupations follow from the fact that they are concentrated in the education, personal services and government sectors which are expected to exhibit weak growth over the remainder of the decade.

See also: This Field of Study Code: C21. Related Code: U24.  
Vol. 1 Occupations Cross-index: 413, 414, 421, 647.

## Work Prospects

1995 to 2000





# Chemical Engineering

Master's University (1 or 2 years)

## Program of Study

This program includes such subjects as petrochemical engineering, polymer chemical engineering, and pulp and paper chemical engineering.

- This program is offered in New Brunswick, Quebec, Ontario, Saskatchewan and Alberta.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in engineering. An interview, letters of recommendation and a graduate admissions test are also required.

## Full-Time Earnings

1992

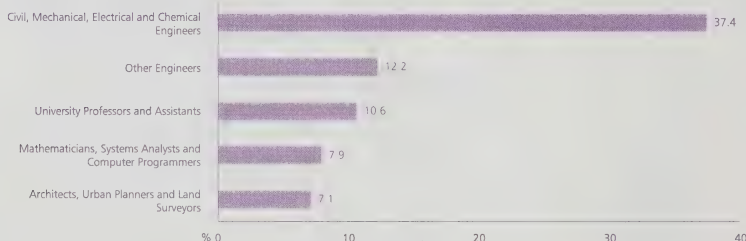


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

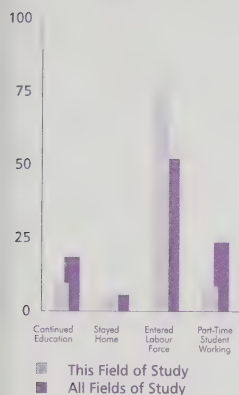
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	85%	83%
Are they satisfied with their work?	92%	95%
Does their work directly match their training?	62%	69%
Do they feel overqualified for their work?	56%	57%



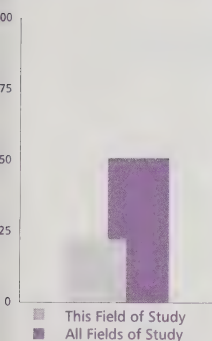
## Where Did They Go?

1992



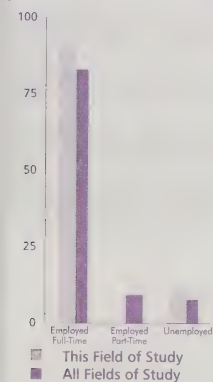
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 190 students received a master's degree in chemical engineering. The majority found work as engineers. Graduates are usually employed in the engineering services industry. Information from various graduate surveys shows that:

- Nine out of 10 graduates found employment, virtually all full-time; the unemployment rate for these graduates is somewhat higher than for other master's graduates.
- Two years after graduation, full-time earnings are slightly lower than the average for other master's graduates and increase at twice the average rate over the next three years.
- Women account for approximately 22% of graduates, compared with 19% about 10 years ago.
- Graduates often work with other engineering and chemistry graduates.
- Not many graduates change jobs. The majority of those employed as engineers two years after graduation are in the same jobs three years later. Graduates employed as chemists have a greater tendency to change jobs. The majority change jobs between the third and fifth years after graduation, usually finding work as engineers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to increase at the same pace as in the recent past. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as university professors and assistants than as civil, mechanical and chemical engineers. The better labour market conditions for the latter occupations follow from the fact that they are concentrated in professional services, wholesale trade and other business service industries which are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: M33. Related Code: U33.  
Vol. 1 Occupations Cross-index: 021, 213, 214, 216, 412.

## Work Prospects

1995 to 2000







# Civil Engineering

Master's University (1 or 2 years)

## Program of Study

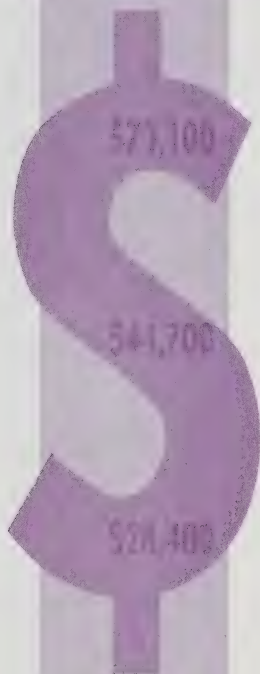
This program includes such fields as geotechnical engineering, highway engineering, municipal engineering and construction project management.

- Civil engineering is offered in New Brunswick, Quebec, Ontario, Saskatchewan, Manitoba and Alberta.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in engineering. An interview, a graduate admissions test and letters of recommendation are also required.

## Full-Time Earnings

1992

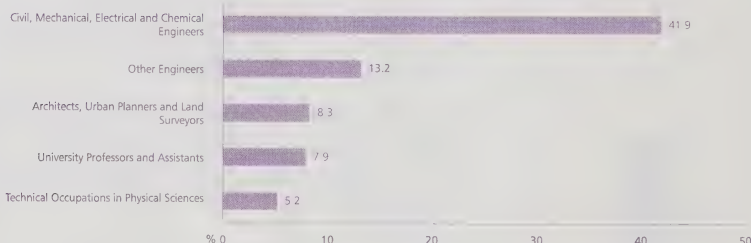


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



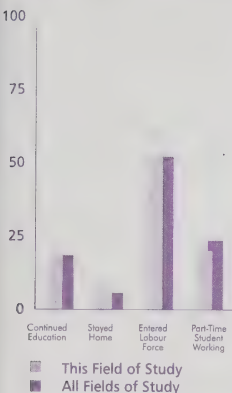
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	79%	83%
Are they satisfied with their work?	96%	95%
Does their work directly match their training?	73%	69%
Do they feel overqualified for their work?	59%	57%

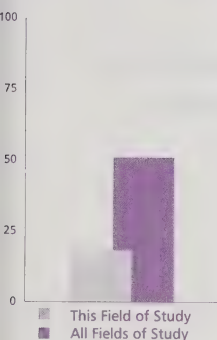
## Where Did They Go?

1992



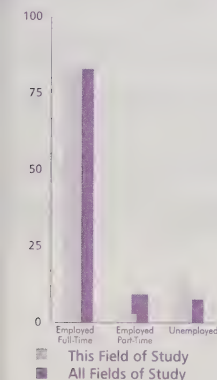
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 330 students received a master's degree in civil engineering, and most found work as engineers. A large majority of graduates are employed in the engineering services industry. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment and very few found part-time employment; the unemployment rate for these graduates is much higher than for other master's graduates.
- Two years after graduation, full-time earnings are about average for master's graduates but increase at one and a half times the average rate for the next three years.
- Women account for approximately 18% of graduates, compared with 5% about 10 years ago.
- These graduates often work with other engineering graduates as well as drafting and construction technology graduates.
- Not many graduates change jobs. The majority of those employed as engineers two years after graduation are in the same jobs three years later. However, many of the graduates employed as administrators become engineers between the third and fifth years after graduation.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are average and rising relative to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as university professors and assistants than as civil engineers and technologists. The labour market conditions for the latter group of occupations follow from the fact that they are concentrated in professional services, wholesale trade and other business service industries which are expected to exhibit above average growth over the remainder of the decade.

See also:

This Field of Study Code: M34. Related Code: U34.  
Vol. 1 Occupations Cross-index: 021, 213, 214, 223, 412.

## Work Prospects

1995 to 2000





# Electrical Engineering

Master's University (1 or 2 years)

## Program of Study

Students specialize in such fields as digital and analogue electronic systems, microwave circuits, integrated circuit design and fabrication, control systems, power systems and data communications systems.

- This program is offered in New Brunswick, Quebec, Ontario, Saskatchewan and Alberta.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in engineering. An interview, a graduate admissions test and letters of recommendation are also required.

## Full-Time Earnings

1992



## Of Graduates\*

\* Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

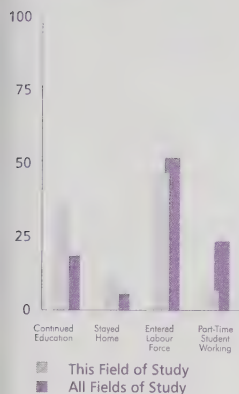
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	86%	83%
Are they satisfied with their work?	98%	95%
Does their work directly match their training?	78%	69%
Do they feel overqualified for their work?	58%	57%



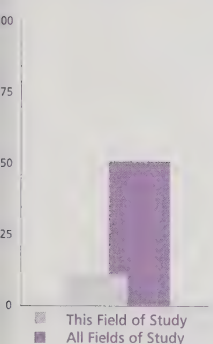
## Where Did They Go?

1992



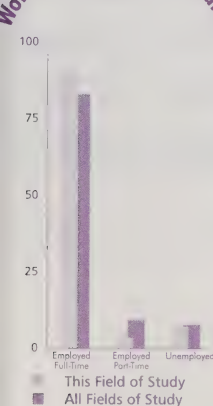
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 510 students received a master's degree in electrical engineering. Most graduates are employed as engineers and some as computer programmers. Graduates generally work in the engineering services industry. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time employment, and a few found part-time employment; the unemployment rate for these graduates is similar to that for other master's graduates.
- Two years after graduation, full-time earnings are the same as the average for other master's graduates and increase at a below average rate for the next three years.
- Women account for approximately 11% of graduates, compared with 2% about 10 years ago.
- Graduates often work with other engineering graduates.
- A relatively significant number of graduates change jobs. Although the majority of graduates employed as engineers two years after graduation are in the same jobs three years later, some have changed jobs, often becoming teachers. Graduates employed as computer systems analysts often become administrators three to five years after graduation.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are average and rising relative to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as university professors and assistants than as electrical engineers, systems analysts, computer programmers and engineering technologists. The better labour market conditions for the latter group of occupations follow from the fact that they are concentrated in professional services, wholesale trade and other business service industries which are expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: M35. Related Code: U35  
Vol.1 Occupations Cross-index: 021, 213, 214, 216, 412.

## Work Prospects

1995 to 2000







# Engineering - Other

Master's University (2 or 3 years)

## Program of Study

Students specialize in such areas as aeronautical, aerospace, mining, biomedical, geological and petroleum engineering.

- This program is offered only in Newfoundland and Ontario.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in engineering. An interview, a graduate admissions test and letters of recommendation are also required.

## Full-Time Earnings

1992



of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



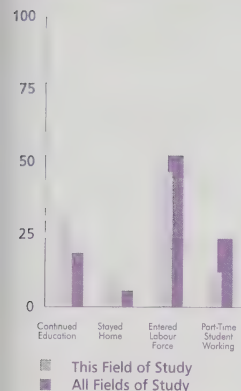
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	79%	83%
Are they satisfied with their work?	96%	95%
Does their work directly match their training?	70%	69%
Do they feel overqualified for their work?	53%	57%

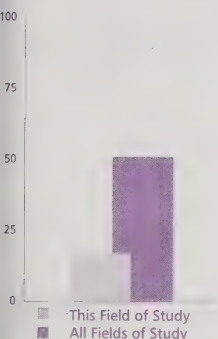
## Where Did They Go?

1992



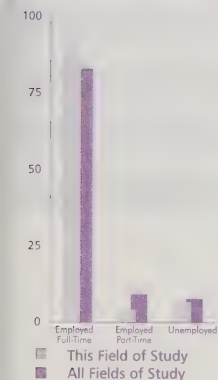
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 660 students received a master's degree in this program. The majority found work as engineers and are usually employed in the engineering services industry. Information from various graduate surveys shows that:

- Nearly nine out of 10 graduates found full-time employment, and nearly one out of 20 found part-time employment; the unemployment rate for these graduates is slightly lower than for other master's graduates.
- Two years after graduation, full-time earnings are slightly lower than the average for other master's graduates and increase at one and a half times the average rate for the next three years.
- Women account for approximately 18% of graduates, compared with 13% about 10 years ago.
- These graduates often find work in the same occupations as university graduates from electrical engineering and geology and community college graduates from instrumentation, transportation technologies and electrical/electronic engineering technologies.
- Few graduates change jobs. The majority of those employed as engineers, geologists or land surveyors two years after graduation are still in the same field three years later. Others found administrative work.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are average but rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as university professors and assistants than as civil, mechanical and chemical engineers, systems analysts, computer programmers and engineering technologists. The labour market conditions for the latter occupations follow from the fact that they are concentrated in the professional services, wholesale trade and other business service industries which are expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: M36. Related Code: U36.  
Vol. 1 Occupations Cross-index: 213, 214, 216, 412, 413.

## Work Prospects

1995 to 2000



How will labour market conditions change for these graduates?



# Mechanical Engineering

Master's University (1 or 2 years)

## Program of Study

Students specialize in manufacturing engineering, applied thermodynamics, mechanical systems design and the design of feedback control systems.

- This program is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in engineering. An interview, a graduate admissions test and letters of recommendation are also required.

## Full-Time Earnings

1992



## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

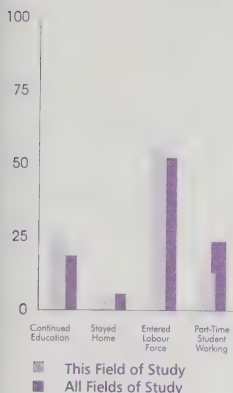
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	73%	83%
Are they satisfied with their work?	92%	95%
Does their work directly match their training?	63%	69%
Do they feel overqualified for their work?	63%	57%



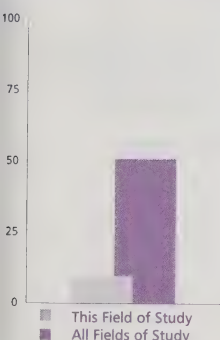
## Where Did They Go?

1992



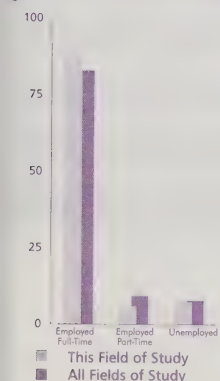
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 270 students received a master's degree in mechanical engineering. The majority are employed as engineers, but some find work in teaching. Graduates are usually employed in the engineering services industry. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is similar to that of other master's graduates.
- Two years after graduation, full-time earnings are below the average for other master's graduates but increase at twice the average rate over the next three years.
- Women account for approximately 10% of graduates, compared with 4% about 10 years ago.
- These graduates often enter the same occupations as other mechanical related engineering (technologist) graduates.
- A relatively significant number of graduates change jobs. Although the majority of graduates employed as engineers two years after graduation are in the same jobs three years later, several have changed jobs, often going into administration. Even more of those employed as teachers changed jobs three to five years after graduation, often to work as engineers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average has found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as university professors and assistants than as mechanical engineers, systems analysts, computer programmers and engineering technologists. The better labour market conditions for the latter occupations follow from the fact that they are concentrated in professional services, wholesale trade and other business service industries which are expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: M37. Related Code: U37.  
Vol. 1 Occupations Cross-index: 021, 213, 214, 216, 412.

## Work Prospects

1995 to 2000







# Architecture

## Undergraduate University (4 years)

### Program of Study

Students entering this field study landscape design, city planning, the history and theory of architecture, and environmental protection.

- Architecture programs are offered at major universities in Nova Scotia, Quebec, Ontario, Manitoba, Alberta and British Columbia.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Enrolment in this program is limited and admission requirements are high. Several institutions require students to have completed two years of university before being admitted to the program. Applicants must have completed secondary school. Quebec students must have a Diploma of Collegial Studies with high marks in mathematics, physics, biology and chemistry.

### Full-Time Earnings

1992

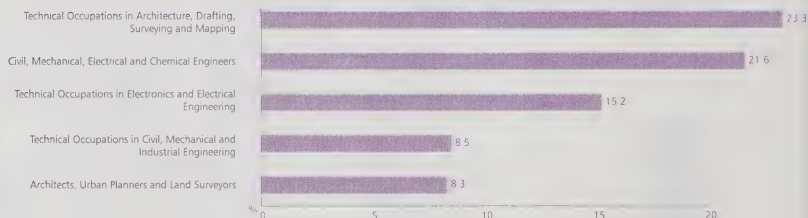


### Of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

1992

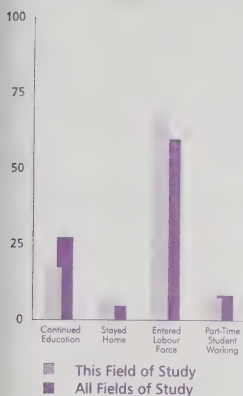
#### HOW MANY SAID YES

#### THIS FIELD OF STUDY ALL FIELDS OF STUDY

Would they make the same educational choice again?	76%	71%
Are they satisfied with their work?	79%	91%
Does their work directly match their training?	56%	57%
Do they feel overqualified for their work?	38%	28%

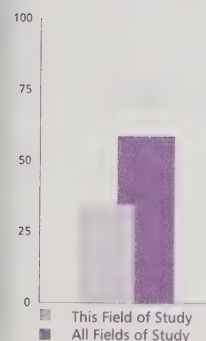
## Where Did They Go?

1992



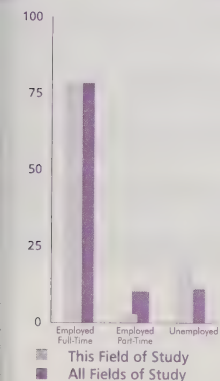
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 560 students graduated in architecture and found work in their field, usually as architectural technicians and, in some cases, as architects or civil engineers. Architecture graduates are most often employed in the professional services sector. Information from various graduate surveys shows that:

- Four out of five graduates found work, usually full-time. The unemployment rate for architecture graduates is significantly higher than for other graduates at this level.
- Two years after graduation, full-time earnings are much lower than the average for other graduates at this level but, between two and five years after graduation, increase at one and a half times the average rate.
- Women account for approximately 34% of graduates, compared with 21% about 10 years ago.
- Since architecture graduates have very specialized training, they rarely encounter major job competition from other graduates.
- These graduates do not tend to change jobs. Most graduates working for architectural firms two years after graduation are still working for them three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace as in the recent past. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more difficulty when searching for employment as architects and draftspersons than as civil engineers/technologists. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in professional services, wholesale trade and other business service industries. These industries are expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: U32. Related Codes: C32, C33. Vol. 1 Occupations Cross-index: 213, 215, 223, 225.

## Work Prospects

1995 to 2000



How will  
labour market  
conditions  
change  
for these  
graduates?

# Chemical Engineering

Undergraduate University (4 or 5 years)

## Program of Study

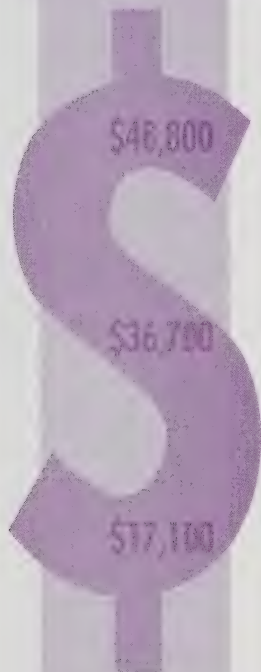
Students enrolled in this program specialize in petrochemical engineering, polymer chemical engineering, and pulp and paper chemical engineering.

- This program is offered in every province except Newfoundland, Prince Edward Island and Manitoba.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Enrolment in this program is extremely limited. Applicants must have a secondary school diploma with good marks in mathematics, chemistry and physics. Quebec applicants must have a Diploma of Collegial Studies in science. Some universities give preference to applicants who have completed one or two years of undergraduate studies. An interview is often required.

## Full-Time Earnings

1992

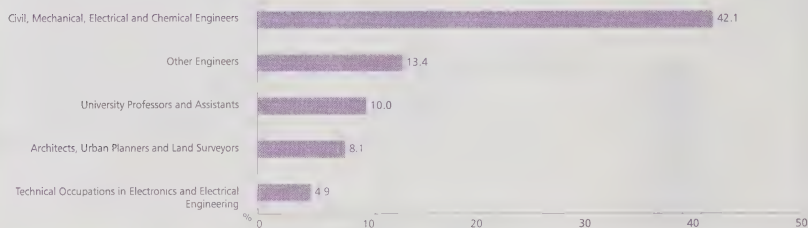


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

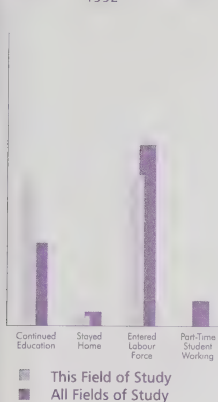
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	76%	71%
Are they satisfied with their work?	87%	91%
Does their work directly match their training?	69%	57%
Do they feel overqualified for their work?	3%	28%



## Where Did They Go?

1992



## After Graduation

In 1994, 730 students received an undergraduate degree in chemical engineering. The majority found work in their field and are employed in the chemical industry. Information from various graduate surveys shows that:

- Nine out of 10 graduates found employment, virtually all full-time; the unemployment rate for these graduates is lower than that of other graduates at this level.
- Two years after graduation, full-time earnings are somewhat higher than the average for other graduates at this level and increase at an above average rate for the next three years.
- Women account for approximately 32% of graduates, compared with 16% about 10 years ago.
- These graduates find work in the same occupations as master's graduates in chemical engineering or community college chemical technology graduates.
- A relatively significant number of graduates change jobs. While the majority of those employed by an engineering firm two years after graduation are in the same jobs three years later, some have become administrators or managers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average but rising unemployment rate. Their relative earnings are rising and are higher than the average earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace as in the recent past. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as university professors and assistants than as chemical engineers or engineering managers. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in professional services, chemical and other business service industries. These industries are expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: U33. Related Codes: M33, C34. Vol. 1 Occupations Cross-index: 021, 213, 214, 412.

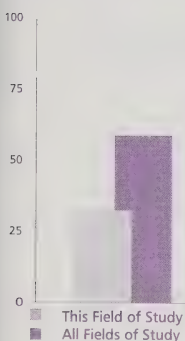
## Work Prospects

1995 to 2000



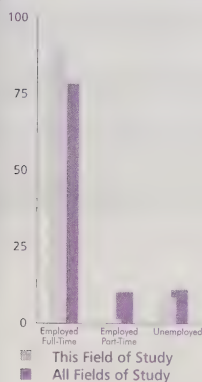
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Civil Engineering

Undergraduate University (4 or 5 years)

## Program of Study

Students enrolled in this program study structural engineering, geotechnical engineering, hydraulic engineering, transportation engineering and environmental engineering.

- Civil engineering is offered at universities in every province except Prince Edward Island.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Enrolment is limited and admission requirements are high. Applicants must have a secondary school diploma with high marks in mathematics and science. Quebec students must have a Diploma of Collegial Studies in science. Preference is given to students who have already completed one or two years of university.

## Full-Time Earnings

1992

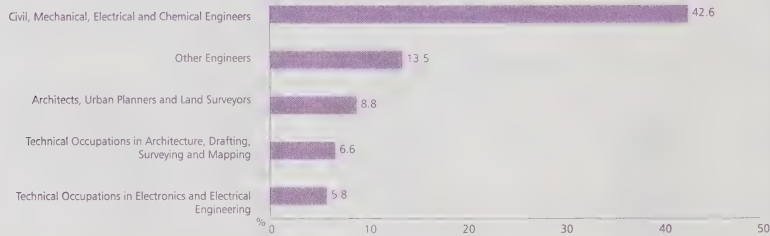


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



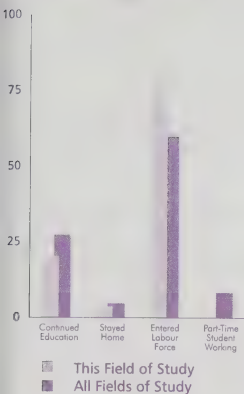
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	82%	71%
Are they satisfied with their work?	95%	91%
Does their work directly match their training?	77%	57%
Do they feel overqualified for their work?	12%	28%

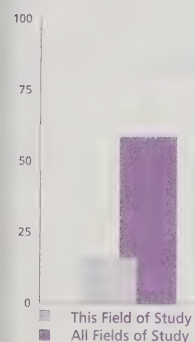
## Where Did They Go?

1992



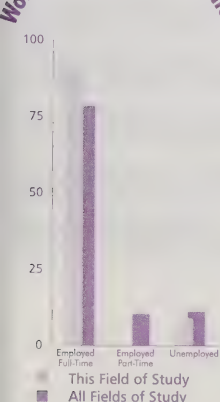
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,190 students graduated in civil engineering. Most found work in their field and several entered administrative positions. Civil engineering graduates are most often employed in the professional services sector. Information from various graduate surveys shows that:

- Nine out of 10 graduates found work, usually full-time. The unemployment rate for these graduates is somewhat lower than for other graduates at this level.
- Two years after graduation, full-time earnings are higher than the average for other graduates and, between two and five years after graduation, increase at one and a half times the average rate.
- Women account for approximately 17% of graduates, compared with 6% about 10 years ago.
- Graduates generally work in the same occupations as graduates from other branches of engineering.
- Many graduates employed by engineering firms enter in administration and, in some cases, find positions as engineers between the third and fifth years of their careers. Many of those who find work in administration after graduating move on to engineering firms by the five-year mark of their careers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average but rising unemployment rate. Their relative earnings are rising and are higher than the average of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more difficulty when searching for employment as managers than as civil engineers or technologists. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in professional services, wholesale trade and other business service industries. These industries are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: U34. Related Codes: M34, C35. Vol. 1 Occupations Cross-index: 021, 213, 214, 223, 225.

## Work Prospects

1995 to 2000



# Electrical Engineering

Undergraduate University (4 or 5 years)

## Program of Study

Electrical engineers design and develop electrical communications products and systems, power systems and computers. They also design and develop electrical and electronic circuits.

- Electrical engineering programs are offered at universities in all provinces except Prince Edward Island.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Enrolment in this program is limited and admission requirements are high. Applicants must have completed secondary school. Quebec students must have a Diploma of Collegial Studies in science.

## Full-Time Earnings

1992

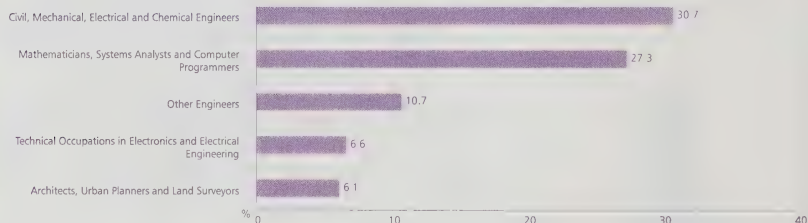


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

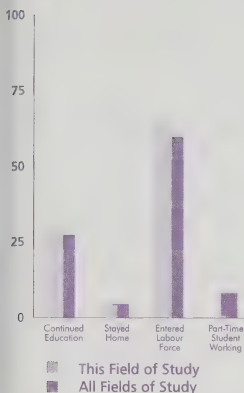
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	76%	71%
Are they satisfied with their work?	93%	91%
Does their work directly match their training?	75%	57%
Do they feel overqualified for their work?	8%	28%



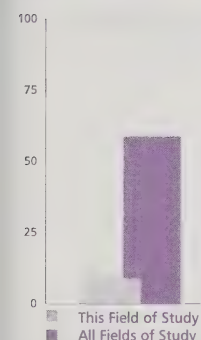
## Where Did They Go?

1992



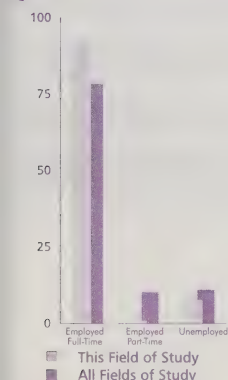
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 2,060 students graduated in electrical engineering. Most found work as engineers, although several became computer systems analysts. Electrical engineering graduates are typically employed in the electric power industry. Information from various graduate surveys shows that:

- More than nine out of 10 graduates found jobs, virtually all full-time. The unemployment rate for electrical engineering graduates is lower than for other graduates at this level and, in fact, is the lowest among all engineering professions.
- Two years after graduation, full-time earnings are significantly higher than the average for other graduates and, between two and five years after graduation, increase at one and a half times the average rate.
- Women represent approximately 9% of graduates, compared with 4% about 10 years ago.
- Graduates often find work in the same occupation as other engineering or computer science graduates.
- Although the majority of graduates working as engineers two years after graduation are in the same field five years later, several enter administration and a few become systems analysts.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average and declining unemployment rate. Their relative earnings are rising and are higher than the average earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve but remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace with this growth. The competition between these graduates will be weak.
- These graduates will have more difficulty when searching for employment as engineering managers than as electrical or electronic engineers and technologists or systems analysts. The labour market conditions for these occupations follow from the fact that they are concentrated in professional services, wholesale trade and the electrical products manufacturing industries. These industries are expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: U35. Related Codes: M35, C37. Vol. 1 Occupations Cross-index: 021, 213, 216, 224, 724.

## Work Prospects

1995 to 2000







# Engineering - Other

Undergraduate University (4 or 5 years)

## Program of Study

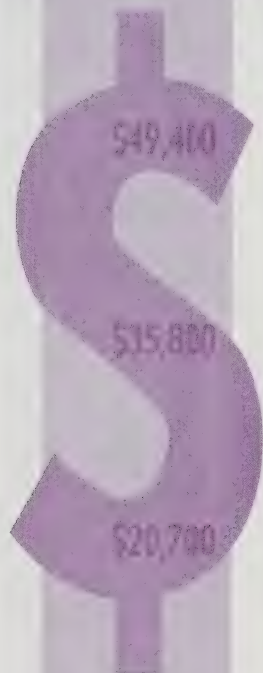
This field of engineering includes aerospace and aeronautical engineering, industrial engineering, metallurgical engineering and computer engineering.

- This program is offered at most major Canadian universities.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics, physics, chemistry and biology. Quebec students must have a Diploma of Collegial Studies in science.

## Full-Time Earnings

1992

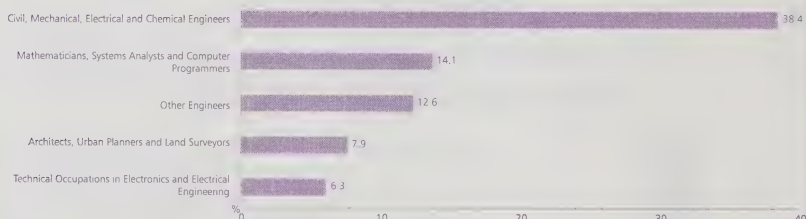


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



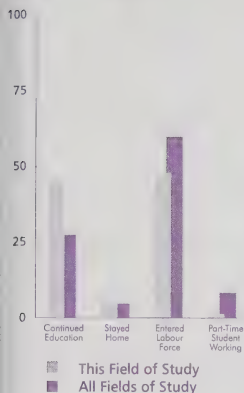
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	77%	71%
Are they satisfied with their work?	91%	91%
Does their work directly match their training?	77%	57%
Do they feel overqualified for their work?	13%	28%

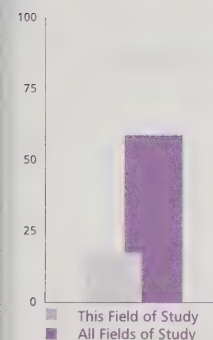
## Where Did They Go?

1992



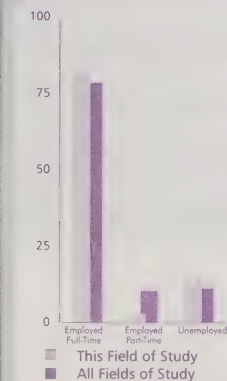
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,960 students graduated from this program. Most found employment as engineers or engineering technologists. Most graduates are in the professional services sector. Information from various graduate surveys shows that:

- Four out of five graduates found full-time work and a very few found part-time work. The unemployment rate for these graduates is higher than for other graduates at this level.
- Two years after graduation, full-time earnings are much higher than the average for other graduates at this level; between two and five years after graduation, income growth is about average.
- Women account for approximately 17% of graduates, compared with 10% about 10 years ago.
- These graduates often find work in the same occupations as other engineering graduates.
- Few graduates change jobs; the majority of those working in engineering two years after graduation are in the same field three years later, although some have gone into administration. Graduates who are working in administration two years after completing their degrees are usually still in that field three years later, although some have moved into engineering.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average and rising unemployment rate. Their relative earnings are rising and are higher than the average of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace as in the recent past. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more difficulty when searching for employment in the architectural and drafting fields than as civil, mechanical and chemical engineers and systems analysts. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in professional services, wholesale trade and other business service industries. These industries are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: U36. Related Code: M36.  
Vol. 1 Occupations Cross-index: 021, 213, 214, 216, 224.

## Work Prospects

1995 to 2000





# Mechanical Engineering

Undergraduate University (4 or 5 years)

## Program of Study

Students in this program can specialize in a variety of areas, such as the design of manufacturing processes and energy conservation techniques.

- Mechanical engineering programs are offered at major universities in all provinces except Prince Edward Island.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Enrolment is limited and admission standards are high. Applicants must have completed secondary school with above average marks. Quebec students must have a Diploma of Collegial Studies in science with high marks in mathematics, physics and chemistry.

## Full-Time Earnings

1992

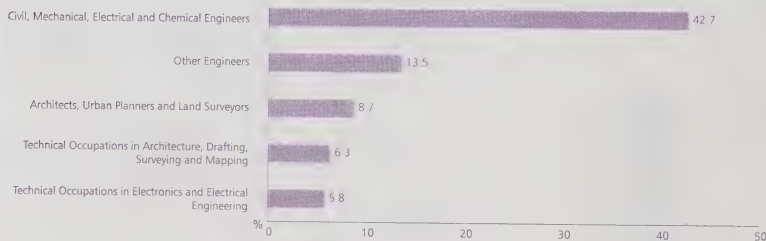


## Of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

THIS FIELD OF STUDY

ALL FIELDS OF STUDY

Would they make the same educational choice again?

84%

71%

Are they satisfied with their work?

94%

91%

Does their work directly match their training?

69%

57%

Do they feel overqualified for their work?

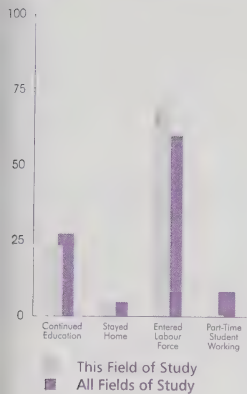
6%

28%



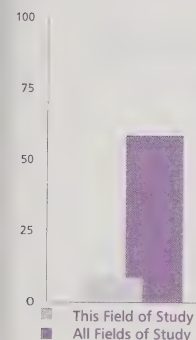
## Where Did They Go?

1992



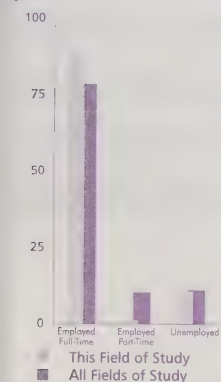
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,950 students graduated in mechanical engineering, and the majority found work as engineers. They are employed in a variety of sectors, but most can be found in professional services. Information from various graduate surveys shows that:

- Nearly nine out of 10 graduates found work, virtually all full-time. The unemployment rate for these graduates is similar to that for other graduates at this level.
- Two years after graduation, full-time earnings are much higher than the average for other graduates but, between two and five years after graduation, increase at a below average rate.
- Women account for approximately 9% of graduates, compared with 4% about 10 years ago.
- Mechanical engineers often find work in the same occupations as other engineering graduates.
- A fair number of graduates change jobs; the majority of those working as engineers two years after graduation are in the same field three years later, but some have entered administration or management. Those working in administration two years after graduation are more likely to change jobs. Five years into their careers, several have found other jobs, usually as engineers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average but rising unemployment rate. Their relative earnings are declining but are still higher than the average earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more difficulty when searching for employment as mechanical technologists and engineering managers than as mechanical engineers. The labour market conditions for the latter group of occupations follow from the fact that they are concentrated in professional services, wholesale trade and other business service industries. These industries are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: U37. Related Codes: M37, C312. Vol. 1 Occupations Cross-index: 021, 213, 214, 216, 223.

## Work Prospects

1995 to 2000







# Architectural and Construction Technologies - Other

Career Program, Community College (2 years)

## Program of Study

Students in this program can specialize in various trades: masonry, drywall, heating and insulation, plumbing, construction-electrician work, metalworking, interior finishing, woodworking and carpentry, and welding.

- This program is offered at community colleges in every province.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have completed high school and be proficient in English (French), mathematics and science. Knowledge of drafting and electronics is an asset. Some colleges require a diagnostic test and an interview.

Full-Time Earnings

1992

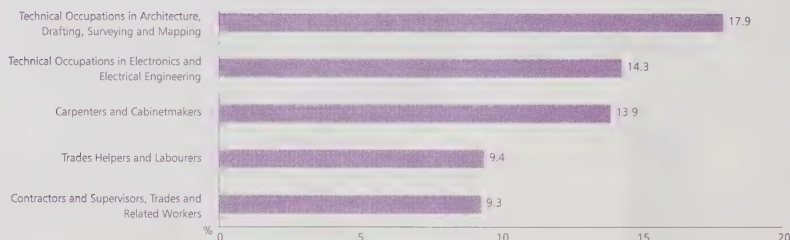


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

Occupations of Graduates

1992



Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	68%	74%
Are they satisfied with their work?	96%	93%
Does their work directly match their training?	50%	61%
Do they feel overqualified for their work?	40%	34%

## After Graduation

In 1994, 700 students graduated in other architectural and construction technologies. These graduates work in a variety of construction-related occupations as masons, drywallers, heating and insulation workers, plumbers, electricians, metal workers, wood workers and carpenters. Graduates are most commonly employed in the construction industry. Information from various graduate surveys shows that:

- More than four out of five graduates found jobs, virtually all full-time; the unemployment rate for these graduates is well above that for other community college graduates.
- Two years after graduation, full-time earnings are slightly higher than the average for other community college graduates and, between two and five years after graduation, increase at one and a half times the average rate.
- Women account for approximately 10% of graduates, the same rate as about 10 years ago.
- Graduates employed as draftspersons often work with graduates in architectural design/drafting technologies, civil engineering and electrical/electronic engineering.
- Most of those working in construction and manufacturing two years after graduation are in the same fields three years later. Job changing seems to be more common for the graduates working as draftspersons two years after graduation. Three years later, several have changed jobs, in some cases becoming architects or work in engineering.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a much higher than average and rising unemployment rate. Their earnings are higher than average but declining relative to the earnings of other graduates at the same level of studies. A significantly smaller proportion of these graduates than average have found jobs that they feel are directly related to their training.

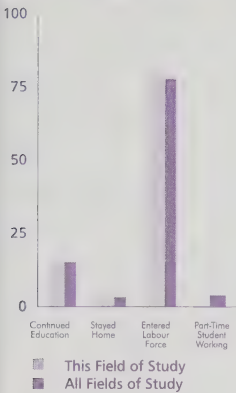
Over the next five years, the labour market situation for these graduates is expected to improve yet remain poor.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- Graduates will have more success when searching for employment as welders. These graduates generally work in the construction, electrical/electronic product fabricating and the metal fabricating industries. The latter two industries are expected to exhibit well above average growth over the remainder of the decade.

**See also:** This Field of Study Code: C32. Related Codes: U32, C35, T33. Vol. 1 Occupations Cross-index: 224, 225, 721, 727, 761.

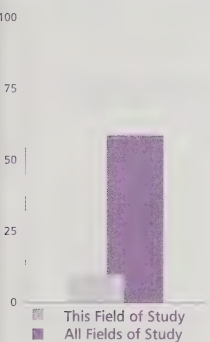
### Where Did They Go?

1992



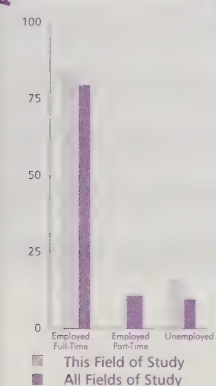
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000





# Architectural Design and Drafting Technologies

Career Program, Community College (2 or 3 years)

## Program of Study

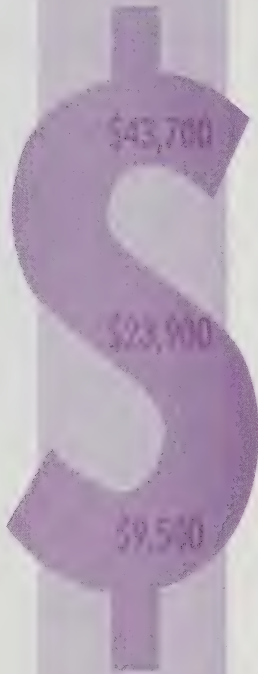
Students enrolled in this program receive training in architectural and structural drafting, architectural art, civil and structural technologies, drafting and layout design.

- It is offered at community colleges in every province except Nova Scotia.
- In New Brunswick, architectural design/drafting technologies are part of the civil technologies program.
- A technician's certificate requires two years of study and a technologist's certificate requires three years.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and be proficient in English (French), mathematics and science.

## Full-Time Earnings

1992

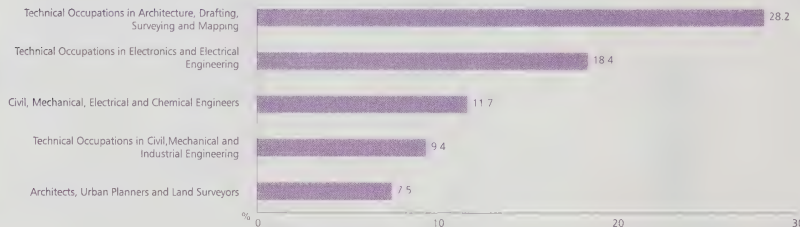


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

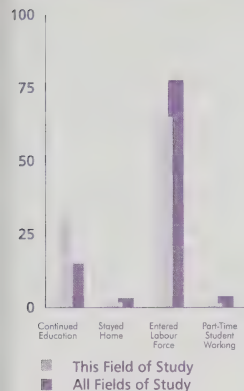
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	75%	74%
Are they satisfied with their work?	90%	93%
Does their work directly match their training?	47%	61%
Do they feel overqualified for their work?	40%	34%



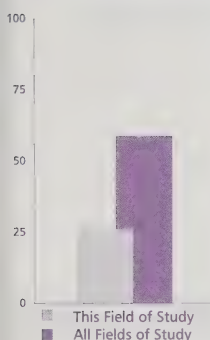
## Where Did They Go?

1992



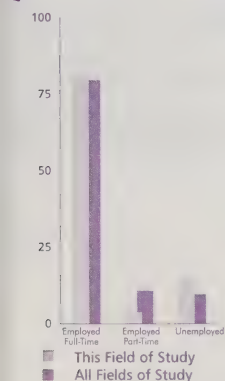
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 920 students graduated in architectural design/drafting technologies. Most found work in their field as draftspersons or technicians. They are usually employed in the professional services sector. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is well above that for other community college graduates.
- Two years after graduation, full-time earnings are lower than the average for other community college graduates; between two and five years after graduation, income growth is above average.
- Women account for approximately 26% of graduates, compared with 23% about 10 years ago.
- Graduates employed as draftspersons or technicians often work with graduates in civil engineering and other architectural technologies.
- Few graduates change jobs. The majority of those employed as draftspersons two years after graduation are in the same jobs three years later. Some have become managers or administrators, and others architects or engineers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a much higher than average and rising unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as architectural and drafting technologists, industrial designers, surveyors and civil engineering technologists. The stable labour market conditions for these occupations follow from the fact that they are concentrated in the professional services and construction industries which are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: C33. Related Codes: U32, T33, T38.  
Vol. 1 Occupations Cross-index: 215, 223, 224, 225.

## Work Prospects

1995 to 2000







# Chemical Engineering Technologies

Career Program, Community College (3 years)

## Program of Study

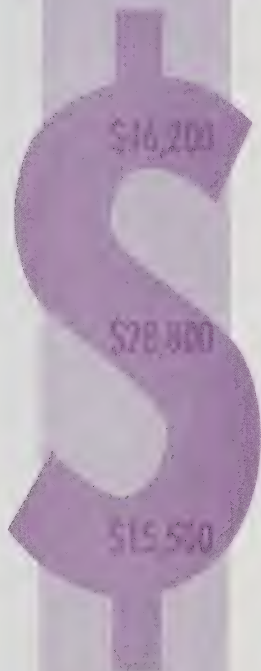
This program trains students in chemical engineering, biochemistry, and industrial chemical (textiles/plastics) and photographic chemical technologies.

- It is offered at community colleges in every province except Newfoundland, Prince Edward Island and Nova Scotia.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with high marks in mathematics, chemistry and English (French). Some colleges require applicants to take diagnostic tests in mathematics and English (French).

## Full-Time Earnings

1992

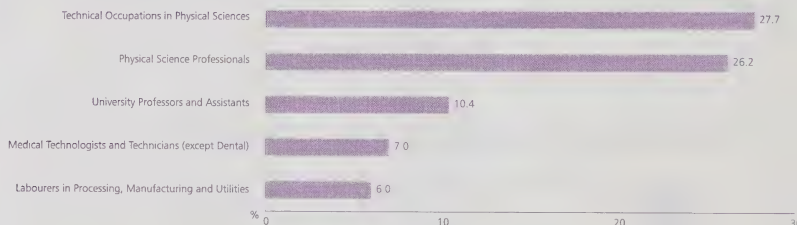


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



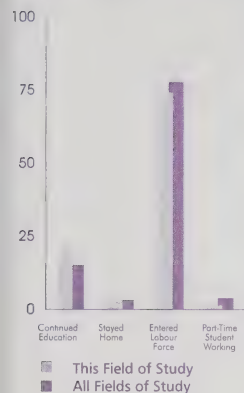
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	68%	74%
Are they satisfied with their work?	87%	93%
Does their work directly match their training?	71%	61%
Do they feel overqualified for their work?	31%	34%

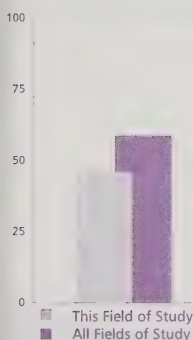
## Where Did They Go?

1992



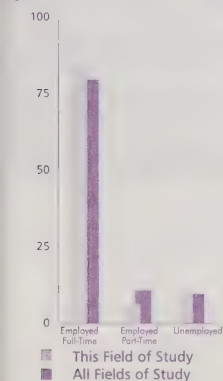
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 710 students graduated in chemical engineering technologies. Most found jobs in their field as technologists. Graduates are usually employed in the professional services and the chemical industries. Information from various graduate surveys shows that:

- Five out of six graduates found full-time work and one out of 20 found part-time employment; the unemployment rate for these graduates is about the same as for other community college graduates.
- Two years after graduation, full-time earnings are higher than the average for other community college graduates and, between two and five years after graduation, increase at about the average rate.
- Women account for 46% of graduates, the same rate as about 10 years ago.
- These graduates generally find jobs in the same occupations as graduates from chemical engineering and medical laboratory technologies.
- A large number of graduates change jobs. A high percentage of those working as chemical engineering technologists two years after graduation have changed jobs three years later. They have gone into various fields, such as health care. The same is true for graduates working in health care two years after graduation. Three years later, some have gone into sales and others have found work as chemical engineering technologists.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average but rising unemployment rate. Their earnings are above average and rising relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition among these graduates will be weak.
- These graduates will have more difficulty when searching for employment as teachers or medical laboratory technologists than as chemical technologists, machine operators and labourers in the chemical industry. The labour market conditions for these occupations follow from the fact that they are concentrated in the chemical products industry which is expected to exhibit strong growth over the remainder of the decade.

**See also:** This Field of Study Code: C34. Related Code: U33.  
Vol. 1 Occupations Cross-index: 211, 221, 321, 412, 942.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?



# Civil Engineering Technologies

Career Program, Community College (2 or 3 years)

## Program of Study

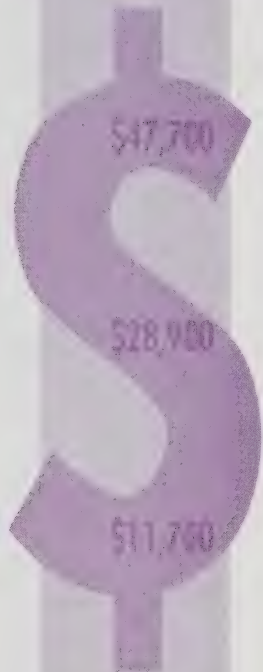
Students receive training in civil, structural and municipal engineering.

- This program is offered at community colleges in every province except Prince Edward Island.
- A technician's certificate usually requires two years of study and a technologist's diploma requires three years.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with high marks in mathematics, physics and English (French). Drafting courses are an asset. Some colleges require a mathematics diagnostic test and an interview.

## Full-Time Earnings

1992

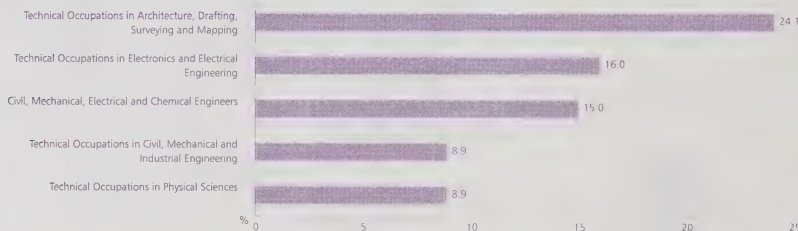


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	82%	74%
Are they satisfied with their work?	96%	93%
Does their work directly match their training?	71%	61%
Do they feel overqualified for their work?	26%	34%



## After Graduation

In 1994, 900 students graduated in civil technologies. Most found employment as engineering technicians in architecture or drafting or in civil engineering. Graduates are usually employed in the professional services industry. Information from various graduate surveys shows that:

- Nine out of 10 graduates found employment, virtually all full-time; the unemployment rate for these graduates is about the same as for other community college graduates.
- Two years after graduation, full-time earnings are above the average for other community college graduates and, between two and five years after graduation, increase at one and a half times the average rate.
- Women account for approximately 10% of graduates, compared with 6% about 10 years ago.
- These graduates often work in the same occupations as architects, civil/mechanical/electrical engineers, architecture design and drafting and electrical engineering technology graduates.
- A fairly high number of graduates change jobs. Although the majority of those employed as technologists two years after graduation are in the same jobs three years later, some work in engineering or have become administrative officers. The same is true for those employed as engineers two years after graduation. Three years later, some have found managerial or administrative positions.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a slightly higher than average and rising unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

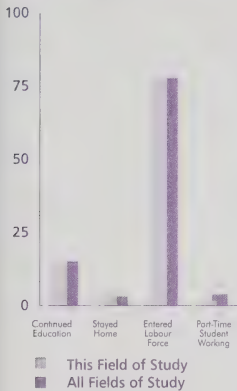
Over the next five years, the labour market situation for these graduates is expected to improve but still be fair.

- The increase in new job openings is expected to exceed the number of people with the requisite skills for these jobs. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more success when searching for employment as civil engineering technologists or physical science technologists than in technical occupations related to architecture and drafting or surveying. These graduates generally work in the professional services sector which is expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: C35. Related Code: U34.  
Vol. 1 Occupations Cross-index: 215, 223, 224, 225.

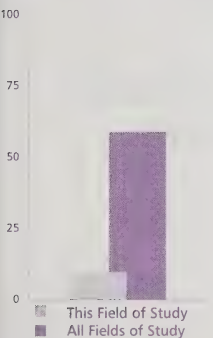
### Where Did They Go?

1992



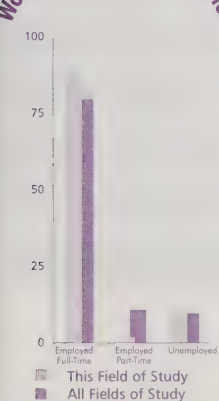
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000







# Electrical/Electronic Engineering Technologies

Career Program, Community College (2 or 3 years)

## Program of Study

Students receive training in a variety of fields: industrial electrical work, air conditioning and heating, refrigeration, hydro, electrical construction, electronic switching, circuitry, avionics and marine and telecommunications technologies.

- This program is offered at community colleges in every province.
- Programs leading to a technician's certificate require about two years of study, and those leading to a technologist's diploma require three years.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with good marks in English (French), chemistry, mathematics and physics. Preference is given to applicants with drafting skills. Most colleges require a diagnostic test and an interview.

## Full-Time Earnings

1992

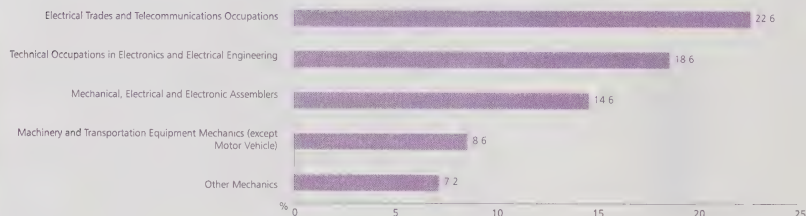


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



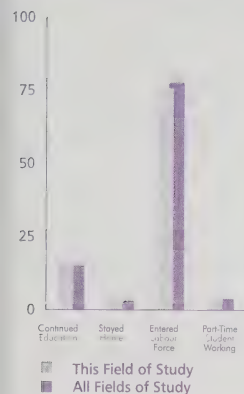
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	78%	74%
Are they satisfied with their work?	97%	93%
Does their work directly match their training?	63%	61%
Do they feel overqualified for their work?	44%	34%

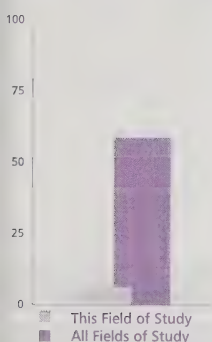
## Where Did They Go?

1992



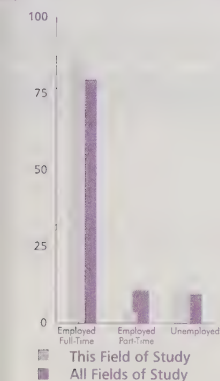
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 3,110 students graduated in electrical/electronic engineering technologies. Most found work in electrical trades and telecommunications or in electrical or electronic assembly occupations. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment: the unemployment rate for these graduates is also about the same as for other community college graduates.
- Two years after graduation, full-time earnings are higher than the average for other community college graduates and, between two and five years after graduation, increase at one and a half times the average rate.
- Women account for approximately 6% of graduates, compared with 2% about 10 years ago.
- These graduates usually work with graduates in civil technologies, computer science, architecture and design, and industrial engineering.
- Graduates have a fairly high tendency to change jobs. A large number of graduates employed in electrical/electronic engineering two years after graduation have changed jobs three years later. The same is true for those employed in repairs two years after graduation. Five years after graduation, many have become managers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an above average and rising unemployment rate. Their earnings are higher than average but declining relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve but remain fair.

- The increase in new job openings is expected to outpace the number of people with the requisite skills for these jobs.
- These graduates will have more success when searching for employment as electricians, telecommunication and cable television workers or electrical/electronic equipment assemblers than as trades contractors and supervisors. Most jobs are in the electrical/electronic products manufacturing industry, which is expected to exhibit strong growth over the remainder of the decade.

See also: This Field of Study Code: C38. Related Code: U35.  
Vol. 1 Occupations Cross-index: 224, 721, 724, 948.

## Work Prospects

1995 to 2000





# Engineering Technologies - Other

## Career Program, Community College (2 years)

### Program of Study

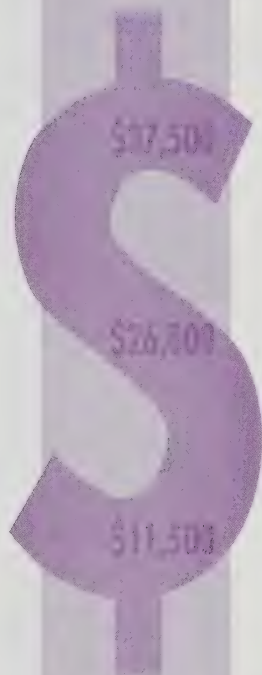
Students enrolled in this program study engineering design and drafting, cartography, mechanical drafting, repairs, metrology and physics.

- It is offered at community colleges in every province.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French), mathematics, physics, geography and drafting.

### Full-Time Earnings

1992

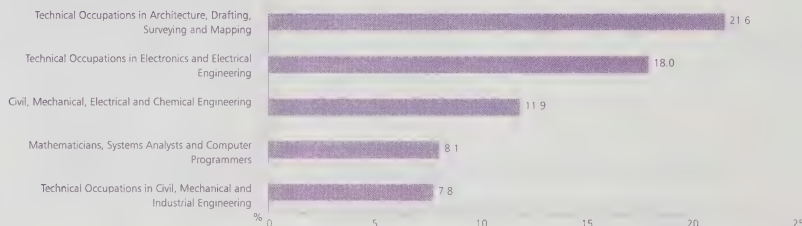


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

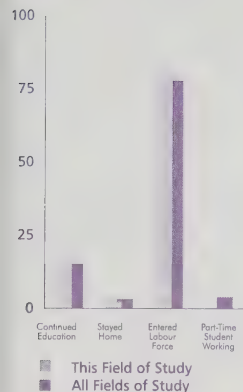
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	73%	74%
Are they satisfied with their work?	92%	93%
Does their work directly match their training?	61%	61%
Do they feel overqualified for their work?	36%	34%



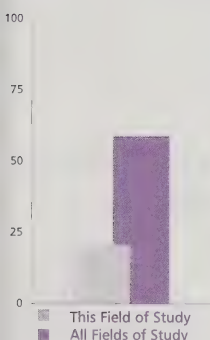
## Where Did They Go?

1992



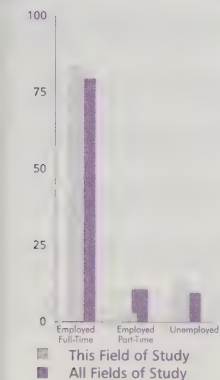
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 560 students graduated from this type of program. Many found work in engineering, often as draftspersons. Graduates are usually employed in the professional services industry. Information from various graduate surveys shows that:

- More than four out of five graduates found full-time employment, and less than one out of 20 found part-time employment; the unemployment rate for these graduates is slightly higher than for other community college graduates.
- Two years after graduation, full-time earnings are about the same as for other community college graduates and, between two and five years after graduation, increase at slightly less than the average rate.
- Women account for approximately 21% of graduates, compared to 18% about 10 years ago.
- These graduates often enter the same occupations as architectural, design and drafting, civil and mechanical engineering, and electrical/electronic technology graduates.
- A large number of graduates change jobs. Many of those employed in engineering two years after graduation left their jobs three years later. The majority of graduates employed in sales two years after graduation also changed jobs by the fifth year of their careers. They entered management and administration or became programmer analysts.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average but declining unemployment rate. Their earnings are average but rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more difficulty when searching for employment as civil technologists, mechanical and electrical assemblers and electrical or telecommunication workers. The wholesale trade and electrical/electronic manufacturing industries are expected to exhibit strong growth but the construction industry will exhibit weak employment growth over the rest of the decade.

See also: This Field of Study Code: C39.  
Vol. 1 Occupations Cross-index: 215, 223, 224, 225, 724.

## Work Prospects

1995 to 2000







# Industrial Engineering Technologies

Career Program, Community College (2 or 3 years)

## Program of Study

Students receive training in industrial design and operation, quality control, machinist work, metal science and management, and in manufacturing process technologies such as automobiles, electrical and chemical products, wood and paper products, aircraft, and clothing.

- This program is offered at community colleges in every province except Newfoundland, Prince Edward Island, Nova Scotia and Manitoba.
- A technician's certificate requires about two years of study and a technologist's diploma requires three years.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and be proficient in English (French), mathematics, chemistry and physics. Courses in computer science, machine shop and welding and relevant work experience are assets. Applicants must often undergo an aptitude test and interview.

## Full-Time Earnings

1992

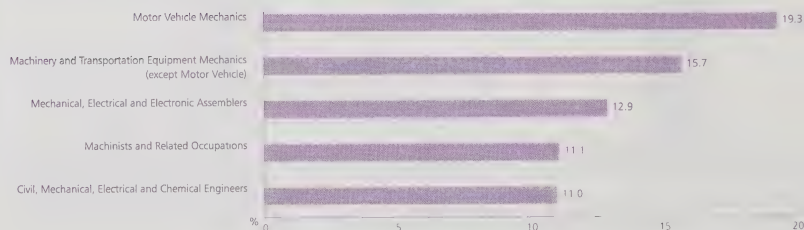


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



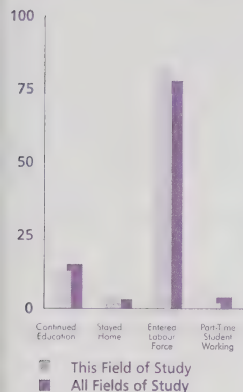
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	73%	74%
Are they satisfied with their work?	88%	93%
Does their work directly match their training?	47%	61%
Do they feel overqualified for their work?	47%	34%

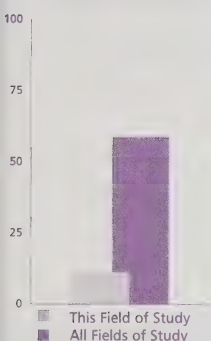
## Where Did They Go?

1992



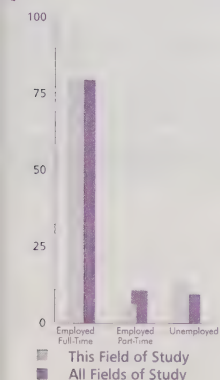
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 590 students graduated in industrial engineering technologies. They are employed in a variety of fields, but most found work as mechanics or mechanical assemblers. They usually work in construction, retail trades or the motor vehicle industry. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is higher than for other community college graduates.
- Two years after graduation, full-time earnings are well above the average for other community college graduates; between two and five years after graduation, income growth is slightly less than average.
- Women account for approximately 11% of graduates, compared with 16% about 10 years ago.
- Graduates employed as mechanics usually work with graduates from mechanical technologies, electrical/electronic engineering, instrumentation and civil engineering.
- A relatively high number of graduates change jobs, although evaluation is difficult since graduates work in such a wide variety of fields. A high number of graduates employed in engineering or as mechanics two years after graduation changed jobs three years later. Many are working in different jobs and in different industries.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average and rising unemployment rate. Their earnings are high but declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve but remain fair.

- While new job openings are expected to remain about the same as over the previous five-year period, the number of people with the requisite skills for these jobs is expected to decline slightly. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates work in industrial design, quality control, material science and manufacturing process technologies. Graduates will have more success when searching for employment as machinists or metal workers. The major sources of employment growth for these graduates are in the machinery, motor vehicle and parts and metal fabricating industries which are expected to exhibit very strong growth over the remainder of the decade.

**See also:** This Field of Study Code: C310. Related Codes: T314, T315. Vol. 1 Occupations Cross-index: 723, 731, 732, 948, 951.

## Work Prospects

1995 to 2000





# Instrumentation

Career Program, Community College (2 years)

## Program of Study

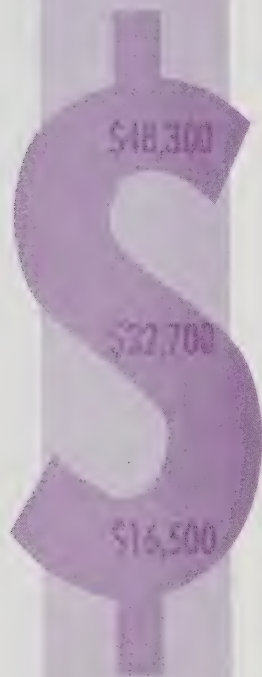
This field of study covers such areas as assembling, inspecting and repairing instruments of measurement and numerical control, and operating oscilloscopes and precision instruments.

- This program is offered by community colleges in every province except Prince Edward Island and Newfoundland.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and be proficient in English (French), mathematics, physics, chemistry and drafting. Courses in machine shop, computer science, electricity and electronics are also assets.

## Full-Time Earnings

1992

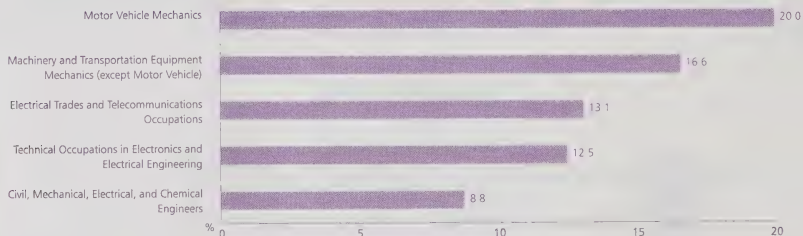


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

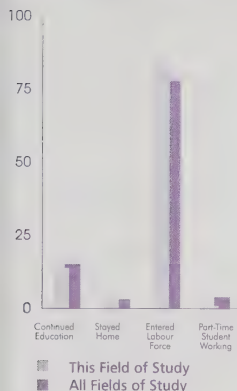
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	88%	74%
Are they satisfied with their work?	94%	93%
Does their work directly match their training?	72%	61%
Do they feel overqualified for their work?	39%	34%



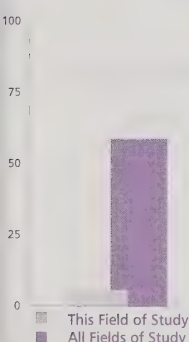
## Where Did They Go?

1992



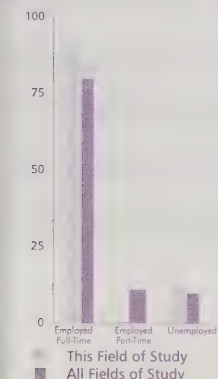
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 520 students graduated in instrumentation. They found work in a variety of fields but are usually employed as mechanics or in electrical trades and telecommunications. Some are engineering technicians. Most are employed in trades and in the electrical/electronic products industry. Information from various graduate surveys shows that:

- Nearly nine out of 10 graduates found full-time employment; the unemployment rate for these graduates is higher than for other community college graduates.
- Two years after graduation, full-time earnings are well above the average for other community college graduates and increase at about the average rate.
- Women account for approximately 6% of graduates, compared to 2% about 10 years ago.
- Graduates employed as mechanics often work with graduates from mechanical technologies or electrical/electronic engineering programs; those employed as engineering technicians work with graduates in drafting and civil engineering.
- Graduates work in a variety of different fields, but few seem to change jobs. For example, the majority of those employed as mechanics or in the manufacturing, installation or repair of electrical equipment two years after graduation are in the same jobs three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average and rising unemployment rate. Their earnings are high but declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain poor.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more success when searching for employment as telecommunication and cable television workers and instrumentation technologists than as motor vehicle technicians, aircraft mechanics and inspectors. The major employment growth in these occupations will occur in the electrical/electronic manufacturing and wholesale trade industries. The aircraft and parts manufacturing and telecommunications sectors will weaken employment growth.

See also: This Field of Study Code: C311.  
Vol. 1 Occupations Cross-index: 224,724, 731, 732, 948.

## Work Prospects

1995 to 2000







# Mechanical Engineering Technologies

Career Program, Community College (2 years)

## Program of Study

Students are trained to repair agricultural equipment, aircraft engines, automobiles, marine equipment and heavy or small equipment, and as auto body repairers.

- This program is offered at community colleges in every province except Prince Edward Island.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have completed high school and be proficient in English (French), mathematics and physics. Courses in chemistry, mechanical drafting, machine shop and welding are assets. Most colleges require a diagnostic test in mathematics and an interview.

## Full-Time Earnings

1992

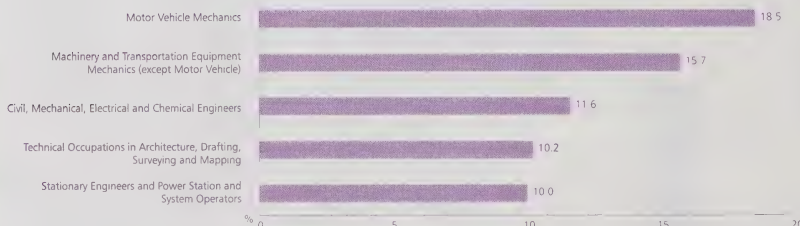


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



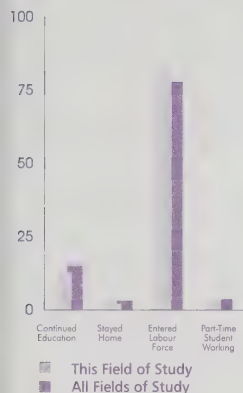
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	73%	74%
Are they satisfied with their work?	94%	93%
Does their work directly match their training?	58%	61%
Do they feel overqualified for their work?	41%	34%

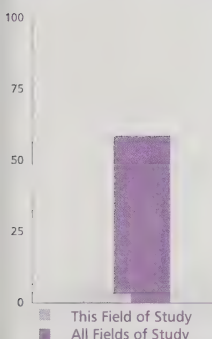
## Where Did They Go?

1992



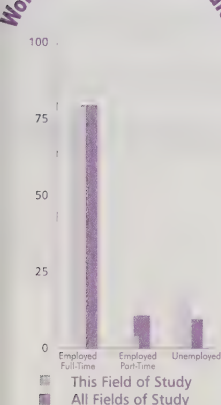
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,650 students graduated in mechanical technologies. They found work in a variety of fields, usually as mechanics or engineering technicians. Graduates are most often employed in the retail sales sector. Information from various graduate surveys shows that:

- Less than four out of five graduates found full-time work, and less than one out of 20 found part-time work; the unemployment rate for these graduates is higher than for other community college graduates.
- Two years after graduation, full-time earnings are higher than the average for other community college graduates and, between two and five years after graduation, increase at an above average rate.
- Women account for approximately 3% of graduates, compared with 1% about 10 years ago.
- These graduates often enter the same occupations as graduates from electrical/electronic engineering and instrumentation and civil engineering.
- Few graduates change jobs. Most of those working as mechanics two years after graduation are in the same jobs three years later. The same is true for those working in engineering technologies two years after graduation, although some go on to become engineers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a much higher than average and rising unemployment rate. Their earnings are rising and high relative to the earnings of other graduates at the same level of studies. A slightly smaller proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet still remain fair.

- While new job openings are expected to remain about the same as over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as machinery or transportation equipment mechanics than as stationary engineers or power station operators. The wholesale trade, public transit and motor vehicle and parts industries will provide the majority of jobs for these graduates.

**See also:** This Field of Study Code: C312. Related Codes: U37, T34, T35, T312. Vol. 1 Occupations Cross-index: 224, 723, 731, 732, 735.

## Work Prospects

1995 to 2000



# Surveying

Career Program, Community College (2 years)

## Program of Study

Students receive training in aerial, civil, hydrographic, seismic, gravity and magnetometer surveying.

- This program is offered at community colleges in every province except Prince Edward Island, New Brunswick and Quebec.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and be proficient in English (French), mathematics, physics and drafting.

## Full-Time Earnings

1992

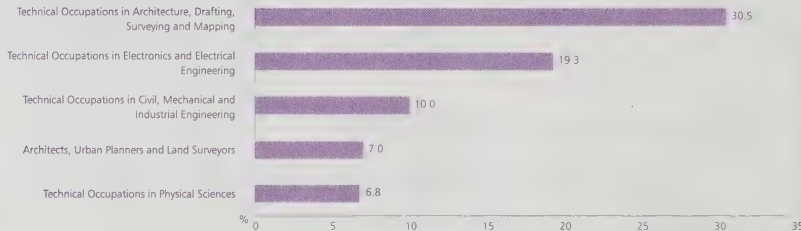


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

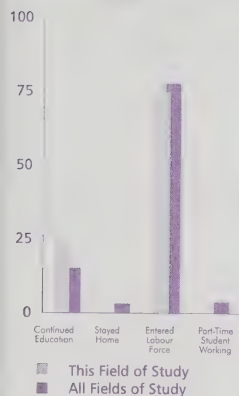
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	59%	74%
Are they satisfied with their work?	97%	93%
Does their work directly match their training?	80%	61%
Do they feel overqualified for their work?	59%	34%



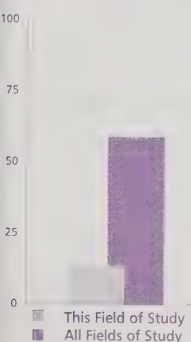
## Where Did They Go?

1992



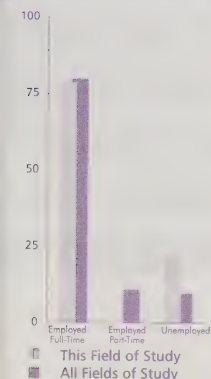
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 190 students graduated from surveying programs. Almost half found work as surveyors and others as engineering technicians. These graduates are usually employed in the professional services industry. Information from various graduate surveys shows that:

- Fewer than four out of five graduates found full-time employment; the unemployment rate for these graduates is much higher than for other community college graduates.
- Two years after graduation, full-time earnings are well above the average for other community college graduates; between two and five years after graduation, income growth is about average.
- Women account for approximately 14% of graduates, compared with 11% about 10 years ago.
- These graduates often enter the same occupations as graduates in civil engineering, geology, geological engineering, civil technologies and architectural design and drafting.
- Few graduates change jobs. The majority of those working as surveyors two years after graduation are in the same jobs three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a much higher than average and rising unemployment rate. Their earnings are rising and high relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more success when searching for employment as architectural, drafting or surveying technologists. These graduates generally find work in the professional services and construction sectors which are expected to exhibit average employment growth over the remainder of the decade.

See also: This Field of Study Code: C313.  
Vol. 1 Occupations Cross-index: 215, 221, 223, 224, 225.

## Work Prospects

1995 to 2000



How will  
labour market  
conditions  
change  
for these  
graduates?





# Transportation Engineering Technologies

Career Program, Community College (2 years)

## Program of Study

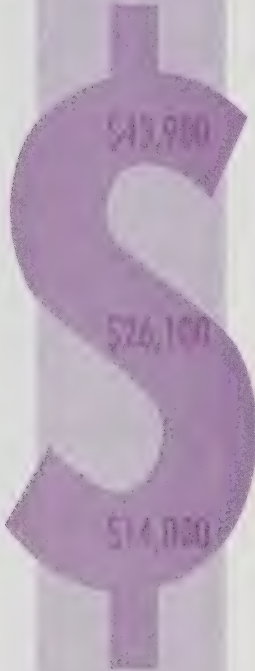
Students receive training in air transport (pilot training, air traffic control and in-flight service), motor transport (bus, tow truck and tractor-trailer training) and rail and marine transport (shipmaster training, navigation and seamanship).

- This program is offered at community colleges in every province except Newfoundland, Prince Edward Island, New Brunswick, Manitoba and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French). Applicants must usually undergo an interview, a medical examination and diagnostic tests in English (French), mathematics and motor vehicle operation.

## Full-Time Earnings

1992

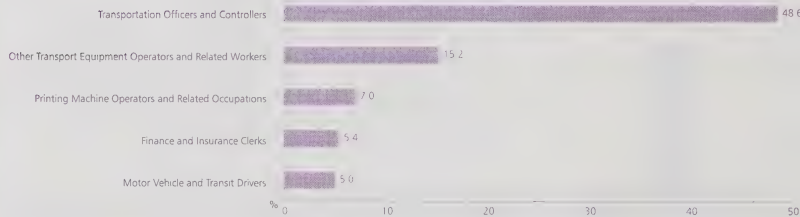


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



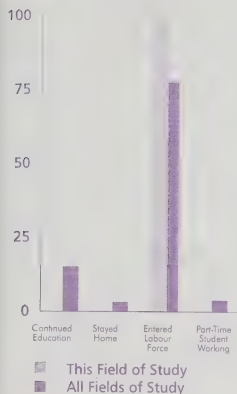
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	67%	74%
Are they satisfied with their work?	91%	93%
Does their work directly match their training?	58%	61%
Do they feel overqualified for their work?	58%	34%

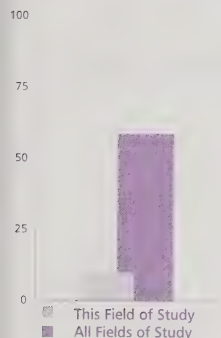
## Where Did They Go?

1992



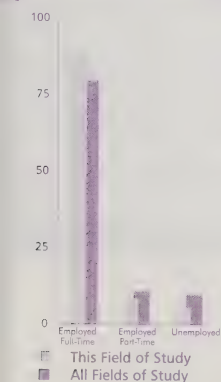
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 270 students graduated in transportation technologies as transportation officers and controllers. Most found employment in air transport, and others in marine transport. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment and less than one out of 10 found part-time employment; one out of 20 graduates is unemployed — half the rate for other community college graduates.
- Two years after graduation, full-time earnings are slightly lower than the average for other community college graduates but, between two and five years after graduation, increase at one and a half times the average rate.
- Women account for approximately 10% of graduates, compared with 4% about 10 years ago.
- Graduates employed in air and marine transport sometimes work with graduates in electronic engineering technologies.
- Very few graduates change jobs. Almost all of those employed in transportation two years after graduation are in the same jobs three years later.

## Work Prospects

The current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average and declining unemployment rate. Their earnings are average but declining relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- Graduates from this field of study have more success when searching for employment as air pilots, air traffic controllers, flight instructors, deck and engineering officers in water transportation, and bus and truck drivers. Global restructuring in the air transportation industry continues to have a significant impact. Downsizing in the rail transportation sector is impacting negatively on current job opportunities. Although truck transport is improving, it is still expected to grow less than the national average over the remainder of the decade.

See also: This Field of Study Code: C314. Related Code: T317.  
Vol. 1 Occupations Cross-index: 227, 413, 741, 743.

## Work Prospects

1995 to 2000





# Architectural Design and Drafting Technologies

Trade/Vocational College (9 months)

## Program of Study

Students enrolled in this program study the principles of architectural drafting, architectural art, civil and structural technology, and layout design.

- It is offered in every province except New Brunswick, Quebec, Saskatchewan and Alberta.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

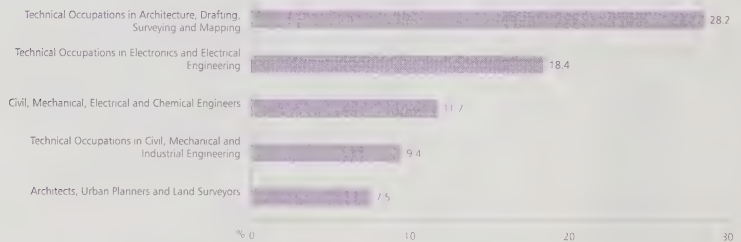


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

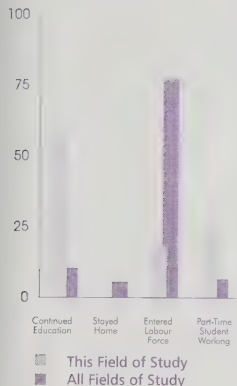
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	76%	74%
Are they satisfied with their work?	100%	92%
Does their work directly match their training?	25%	47%
Do they feel overqualified for their work?	50%	36%



## Where Did They Go?

1992



## After Graduation

In 1994, 235 students received a diploma in architectural design/drafting technologies from a trade/vocational college. Half the graduates found work as industrial designers and were employed in the professional services industry. Information from various graduate surveys shows that:

- Nineteen out of 20 graduates found full-time employment; the unemployment rate for these graduates is one fifth that of the trade/vocational average.
- Two years after graduation, full-time earnings are above the average for other trade/vocational graduates, but increase very slowly over the next three years.
- Women account for approximately 27% of graduates, compared with 22% about 10 years ago.
- These graduates often find work in the same occupations as university graduates in architecture, civil and electrical/electronic engineering and community college graduates in architecture design and drafting, civil and electrical/electronic technologies.
- Very few graduates change jobs. The majority of those employed in design and drafting two years after graduation are in the same field three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as architectural science technicians than in other occupations. These occupations are concentrated in the professional services and other business services industries which are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: T33. Related Code: C33.  
Vol. 1 Occupations Cross-index: 215, 223, 224, 225.

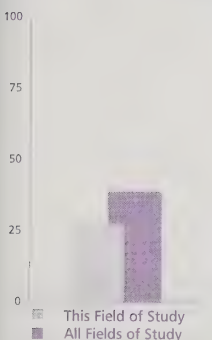
## Work Prospects

1995 to 2000



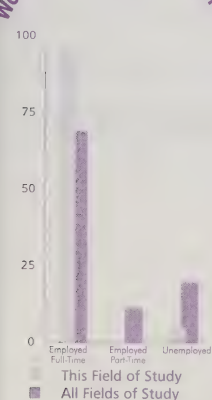
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Auto Body Repair

Trade/Vocational College (8 months)

## Program of Study

Students learn how to repair automobile and truck bodies.

- This program is offered at institutions in every province.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

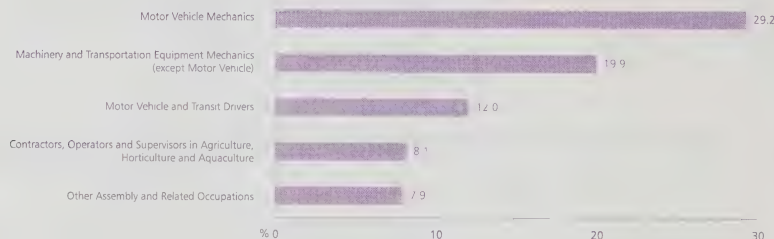


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



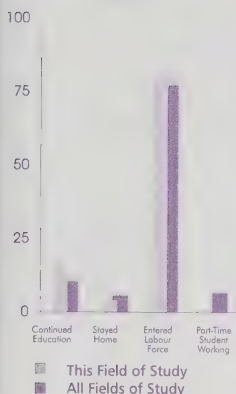
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	68%	74%
Are they satisfied with their work?	92%	92%
Does their work directly match their training?	24%	47%
Do they feel overqualified for their work?	53%	36%

## Where Did They Go?

1992



## After Graduation

In 1994, 370 students received a diploma in auto body repairs from a trade/vocational college. Most found employment as auto body repairers, mechanics, transit operators or motor vehicle drivers, usually in the retail trade industries. Information from various graduate surveys shows that:

- Three quarters of graduates found full-time employment and less than one out of 20 found part-time employment; the unemployment rate for these graduates is about the same as for other trade/vocational graduates.
- Two years after graduation, full-time earnings are below the average for other trade/vocational graduates, but increase at an above average rate over the next three years.
- Women account for approximately 2% of graduates; there were no female graduates from this course 10 years ago.
- These graduates often enter the same occupations as graduates in auto mechanics, heavy equipment technologies and other mechanical engineering technologies.
- Very few graduates change jobs. The majority of those employed as auto body repairers two years after graduation are in the same jobs three years later, although some have become specialized.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are stable but low relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase by slightly less. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more difficulty when searching for employment as auto body repairers than as painters and coaters or metal sprayers contractors. The labour market conditions for the latter occupations follow from the fact that they are concentrated in the retail and wholesale trade and the construction and public transit industries. These are expected to exhibit average growth and above average growth respectively over the remainder of the decade.

See also: This Field of Study Code: T34. Related Code: C312.  
Vol. 1 Occupations Cross-index: 731, 732, 741, 744, 949.

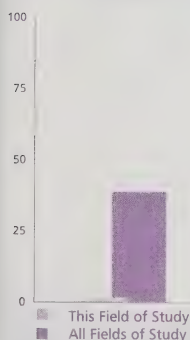
## Work Prospects

1995 to 2000



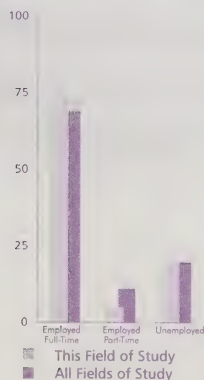
## Percentage of Women

1994



## Work Life of Recent Graduates

1992





# Auto Mechanic

Trade/Vocational College (7 months)

## Program of Study

Students can specialize in auto electricity, auto transmissions, brakes, diagnostic mechanical equipment, front end mechanics, and tire repair and servicing.

- This program is offered in every province.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

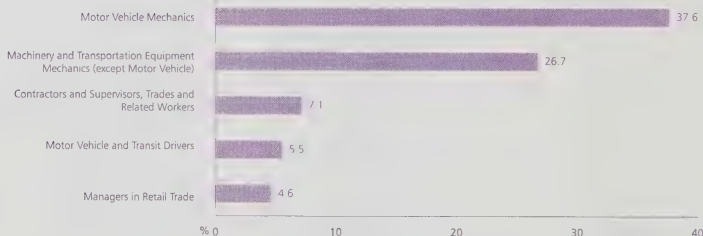


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



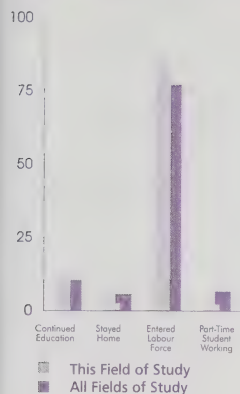
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	68%	74%
Are they satisfied with their work?	90%	92%
Does their work directly match their training?	41%	47%
Do they feel overqualified for their work?	33%	36%

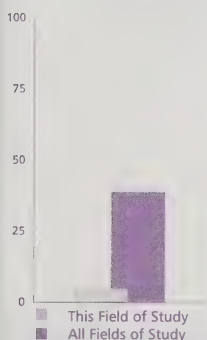
## Where Did They Go?

1992



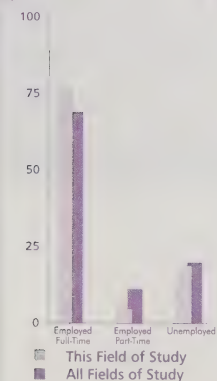
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,750 students received a diploma in auto mechanics from a trade/vocational college. Most found work as mechanics and are usually employed in the retail trade industry. Information from various graduate surveys shows that:

- Less than four out of five graduates found full-time employment, and less than one out of 20 found part-time employment; the unemployment rate for these graduates is slightly below the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are below the average for other trade/vocational graduates and increase at about the average rate for the next three years.
- Women account for approximately 5% of graduates, compared with 1% about 10 years ago.
- These graduates often enter the same occupations as graduates in heavy equipment technologies, auto body repairs and other mechanical engineering technologies.
- Very few graduates change jobs. The majority of those employed as mechanics two years after graduation are in the same jobs three years later. However, many graduates, temporarily employed as salespersons, become mechanics three to five years after graduation.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A below average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve slightly yet remain fair.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a slightly slower pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more success when searching for employment as machinery and transportation equipment mechanics than as motor vehicle mechanics. These graduates are concentrated in the retail and wholesale trade industries, which are expected to exhibit average growth over the remainder of the decade.

**See also:** This Field of Study Code: T35. Related Code: C312.  
Vol. 1 Occupations Cross-index: 731, 732, 741, 744.

## Work Prospects

1995 to 2000







# Civil Engineering Technologies

Trade/Vocational College (6 months)

## Program of Study

Students enrolled in this program receive training in road construction, piping technologies and bridge construction.

- This program is offered in every province except Newfoundland, Prince Edward Island, Nova Scotia and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

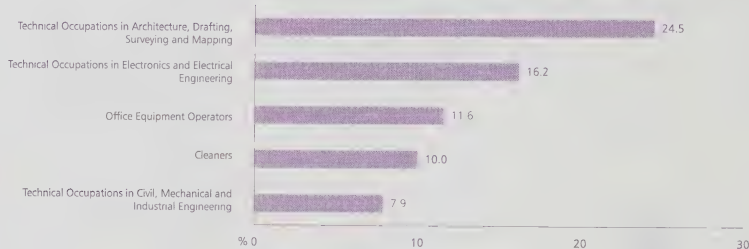


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



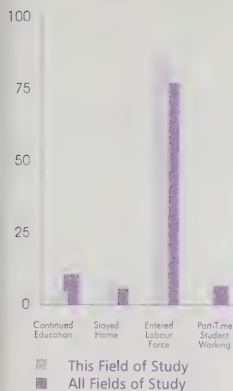
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	81%	74%
Are they satisfied with their work?	92%	92%
Does their work directly match their training?	53%	47%
Do they feel overqualified for their work?	25%	36%

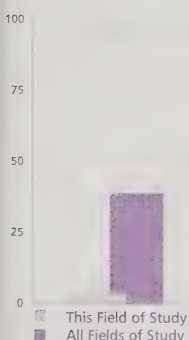
## Where Did They Go?

1992



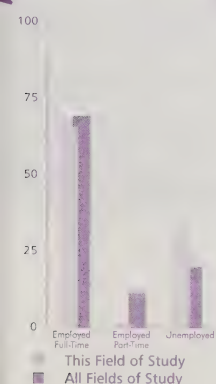
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 160 students received a diploma in civil engineering technologies from a trade/vocational college. The majority found jobs as draftspersons. Some are also in management and administration and others are office equipment operators. Most graduates are employed in professional services and the communications industry. Information from various graduate surveys shows that:

- Two thirds of graduates found employment, almost all full-time; the unemployment rate for these graduates is much higher than the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are much higher than the average for other trade/vocational graduates and increase at one and a half times the average rate for the next three years.
- Women account for approximately 3% of graduates; there were almost no female graduates about 10 years ago.
- These graduates often enter the same occupations as civil engineering (technology), construction, drafting and architecture design and drafting graduates.
- Few graduates change jobs. The majority of those employed in construction two years after graduation are in the same field three years later. Others find jobs in electrical/electronic equipment, in motor transport or as stationary engineers three to five years after graduation.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to remain about the same. The competition among these graduates will be weak.
- These graduates will have more difficulty when searching for employment as architectural draftspersons and civil technologists than as electronic technologists and office equipment operators. These occupations are concentrated in the professional services and business and wholesale trade industries which are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: T36. Related Code: C35. Vol. 1 Occupations Cross-index: 215, 223, 225.

## Work Prospects

1995 to 2000





# Construction Technologies

Trade/Vocational College (8 months)

## Program of Study

Students receive training in such construction trades as masonry, plastering, heating, insulation, plumbing, interior finishing, metalworking, woodworking and carpentry.

- This program is offered in every province.
- Apprenticeship programs are available in some cases.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

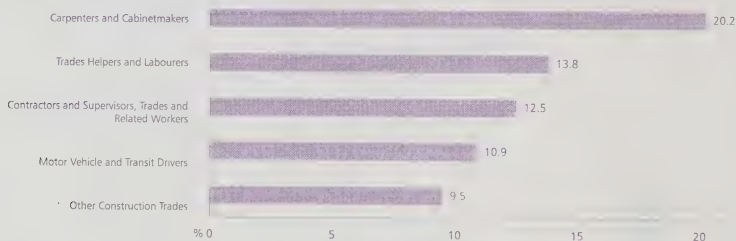


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	73%	74%
Are they satisfied with their work?	91%	92%
Does their work directly match their training?	30%	47%
Do they feel overqualified for their work?	40%	36%



## After Graduation

In 1994, 2,440 students received a diploma in construction technologies from a trade/vocational college, and most found employment in the construction industry. They work as carpenters or joiners or in motor transport. Information from various graduate surveys shows that:

- Nearly seven out of 10 graduates found full-time employment, and only a few found part-time employment; the unemployment rate for these graduates is well above the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are slightly above the average for other trade/vocational graduates but increase at a below average rate for the next three years.
- Women account for approximately 9% of graduates, compared with 6% about 10 years ago.
- These graduates often find work in the same occupations as graduates from other construction related trades.
- Few graduates change jobs. The majority of those employed in construction two years after graduation are in the same jobs three years later. Some have moved on to jobs as joiners or mechanics. The majority of those employed as joiners are in the same jobs five years into their careers, although some have become carpenters.

## Work Prospects

Due to the weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are high but declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

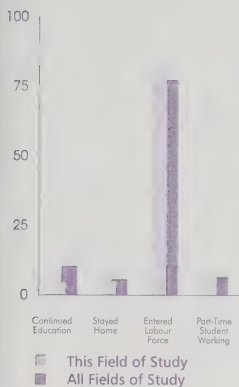
Over the next five years, the labour market situation for these graduates is expected to get better yet still be poor.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- Although there is a positive outlook for most of the occupations entered by these graduates, job opportunities will be more plentiful for plumbers and plasterers than for tradespersons and labourers. The labour market conditions for all of these occupations follow from the fact that they are concentrated in the construction industry which is expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: T37. Related Code: C32.  
Vol. 1 Occupations Cross-index: 721, 725, 727, 728, 761.

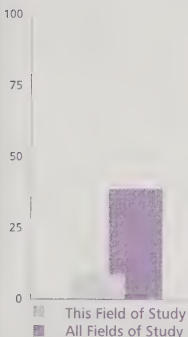
### Where Did They Go?

1992



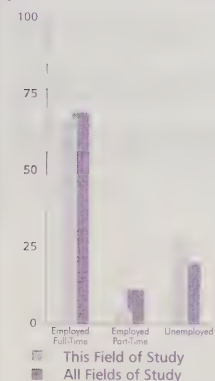
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000





## Drafting Technologies

Trade/Vocational College (7 months)

### Program of Study

Students receive training in engineering design and drafting, cartography and mechanical drafting.

- This program is offered in every province except Alberta and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

### Full-Time Earnings

1992

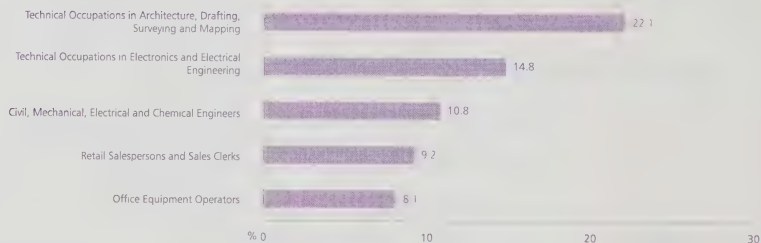


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	57%	74%
Are they satisfied with their work?	87%	92%
Does their work directly match their training?	35%	47%
Do they feel overqualified for their work?	53%	36%

## After Graduation

In 1994, 360 students received a diploma in drafting technologies from a trade/vocational college and found jobs in a wide variety of areas. Most are employed in architectural drafting in the professional services industry. Information from various graduate surveys shows that:

- Two out of three graduates found full-time employment, and more than one out of 10 found part-time employment; the unemployment rate for these graduates is slightly above the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are below the average for other trade/vocational graduates but increase at about the average rate for the next three years.
- Women account for approximately 28% of graduates, compared with 26% about 10 years ago.
- These graduates often find work in the same occupations as civil engineering (technology), construction technology and architecture design and drafting graduates.
- Very few graduates change jobs. The majority of those employed as draftspersons two years after graduation are in the same jobs three years later, although some have decided to continue their studies and become architects.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a slightly above average and rising unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

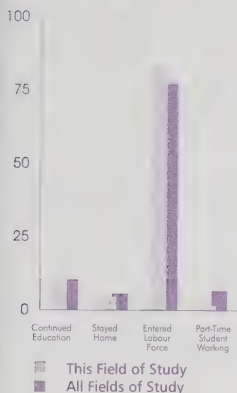
Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as drafting technicians than as civil engineering technologists. These occupations are concentrated in the wholesale trade, professional services and construction industries. These industries are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: T38. Related Code: C33.  
Vol. 1 Occupations Cross-index: 142, 213, 215, 223, 225.

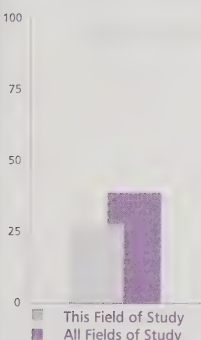
### Where Did They Go?

1992



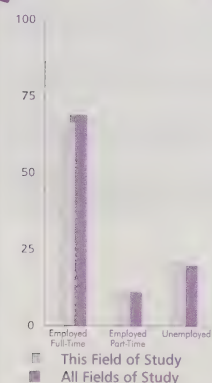
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000





# Electrical/Electronic Engineering Technologies

Trade/Vocational College (9 months)

## Program of Study

Students receive training in electrical technology, electronic technology, avionics, electric motors, marine electronics and microwave telecommunications.

- This program is offered in every province.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

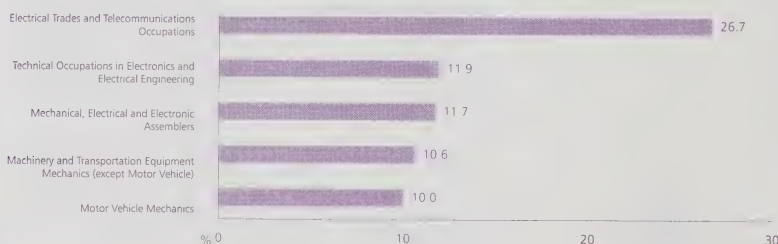


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	72%	74%
Are they satisfied with their work?	87%	92%
Does their work directly match their training?	48%	47%
Do they feel overqualified for their work?	33%	36%



## After Graduation

In 1994, 2,260 students received a diploma in electrical/electronic engineering technologies from a trade/vocational institution. Most found work as telecommunications equipment installers and repairers, cable television service and maintenance technicians, electric/electronic equipment assemblers or in instrumentation. Information from various graduate surveys shows that:

- More than three quarters of these graduates found full-time employment, and some found part-time employment; the unemployment rate for these graduates is slightly above the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are slightly above the average for other trade/vocational graduates and increase at an above average rate for the next three years.
- Women account for approximately 5% of graduates, the same rate as about 10 years ago.
- These graduates often enter the same occupations as community college and university graduates in electrical/electronic engineering (technology), computer science and instrumentation.
- Relatively few graduates change jobs. Almost all graduates employed in the manufacture and repair of electrical/electronic equipment two years after graduation are in the same field three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are slightly higher than the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

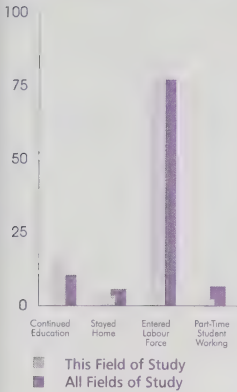
Over the next five years, the labour market situation for these graduates is expected to get better but remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to decline. The competition among these graduates will be weak.
- These graduates will have more difficulty when searching for employment as mechanics or mechanical and electrical assemblers than in electrical trades and telecommunications occupations. The better labour market conditions for the latter occupations follow from the fact that they are concentrated in the construction, motor vehicle, electrical and electronic parts, and mechanical and electronic assembly industries. These industries are expected to exhibit average growth over the remainder of the decade.

**See also:** This Field of Study Code: T310. Related Code: C38.  
Vol. 1 Occupations Cross-index: 224, 642, 721, 729, 948.

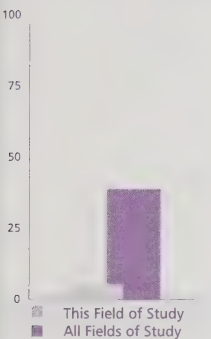
### Where Did They Go?

1992



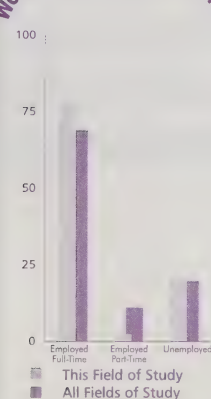
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000







# Heavy Equipment Mechanic

Trade/Vocational College (8 months)

## Program of Study

Students receive training in the operation and mechanics of heavy equipment such as cranes, bulldozers and forestry equipment.

- This program is available in every province except Prince Edward Island.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

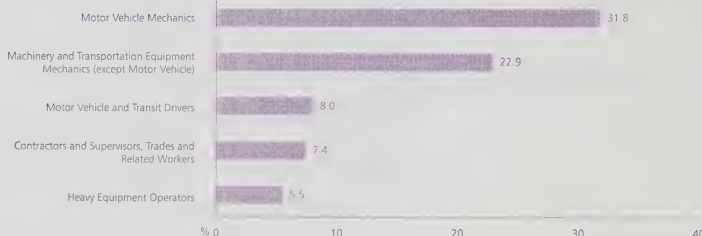


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



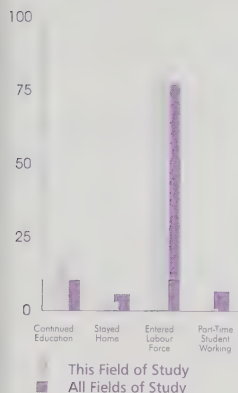
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	72%	74%
Are they satisfied with their work?	88%	92%
Does their work directly match their training?	25%	47%
Do they feel overqualified for their work?	54%	36%

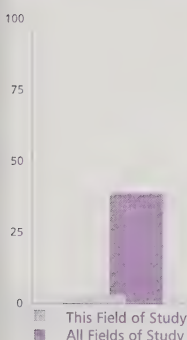
## Where Did They Go?

1992



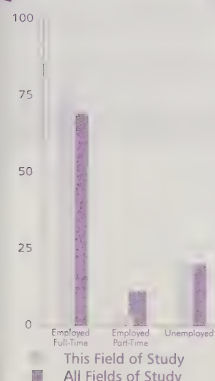
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,860 students received a diploma in heavy equipment mechanics from a trade/vocational institution. Many graduates found work as heavy equipment repairers, and others as transit operators or motor vehicle drivers. Graduates are often employed in the construction or forestry industry. Information from various graduate surveys shows that:

- Three quarters of graduates found full-time employment and some found part-time employment; the unemployment rate for these graduates is similar to that of other trade/vocational graduates.
- Two years after graduation, full-time earnings are above the average for other trade/vocational graduates and increase at about the average rate over the next three years.
- Women account for approximately 3% of graduates, the same as 10 years ago.
- These graduates often enter the same occupations as graduates from other mechanical engineering technologies and auto mechanics.
- The majority of those employed as mechanics two years after graduation are in the same jobs three years later. The same is true for those employed as truck drivers. However, some graduates employed as excavators become mechanics three to five years after graduation.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a slightly slower pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have the most success when searching for employment as motor vehicle mechanics and machinery and transportation mechanics. The labour market conditions for these occupations follow from the fact that they are concentrated in the retail trade, construction and forestry industries which are expected to exhibit average growth over the remainder of the decade. The key growth sector is public transit.

See also: This Field of Study Code: T312. Related Code: C312.  
Vol. 1 Occupations Cross-index: 731, 732, 742, 951.

## Work Prospects

1995 to 2000





# Machinist

Trade/Vocational College (8 months)

## Program of Study

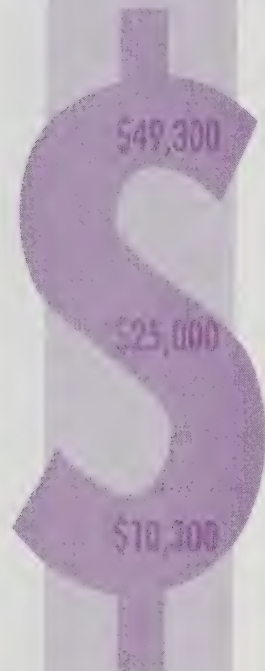
Students receive training in bearing manufacturing, gear cutting, machine shop, and tool and die making.

- This program is offered in every province.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

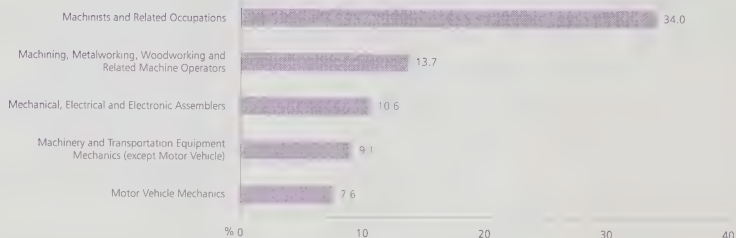


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



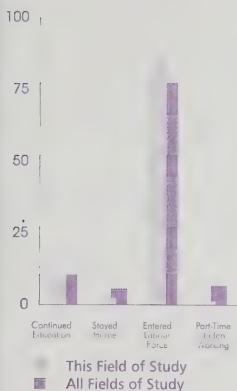
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	61%	74%
Are they satisfied with their work?	89%	92%
Does their work directly match their training?	36%	47%
Do they feel overqualified for their work?	40%	36%

## Where Did They Go?

1992



## After Graduation

In 1994, 1,260 students received a diploma in this field from a trade/vocational college. The majority found jobs as machinists and are usually employed in the fabricated metal products industry. Information from various graduate surveys shows that:

- Three out of four graduates found full-time employment, and none found part-time employment; the unemployment rate for these graduates is far above the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are slightly higher than the average for other trade/vocational graduates and increase at an above average rate for the next three years.
- Women account for approximately 6% of graduates, compared with 4% about 10 years ago.
- These graduates often find work in the same occupations as welding, manufacturing and mechanical technology graduates.
- Few graduates change jobs. The majority of those employed in metalworking two years after graduation are in the same field three years later, while some have found jobs as mechanics. Two years after graduation, a few graduates are employed as mechanics. They sometimes work as lathe operators three to five years after graduation.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average and rising unemployment rate. Their earnings are high but declining relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve and become fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to remain constant or rise only slightly. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more success when searching for employment as machinists than as mechanical and electrical assemblers. The majority of graduates find employment in the metal fabrication and motor vehicle sectors of the economy which are expected to exhibit above average growth over the remainder of the decade. The construction and retail trade sectors are also large employers of these graduates. These sectors are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: T314. Related Code: C310.  
Vol. 1 Occupations Cross-index: 723, 731, 732, 748, 951.

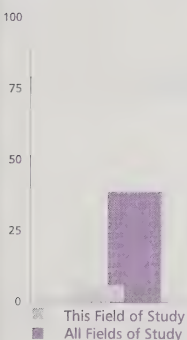
## Work Prospects

1995 to 2000



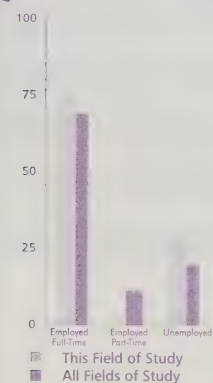
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Manufacturing Engineering Technologies

Trade/Vocational College (6 months)

## Program of Study

Students receive training in the manufacturing of electrical/electronic equipment, metal products, pulp and paper products, aircraft, clothing, rubber, glass, plastics and chemicals.

- This program is offered in every province.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

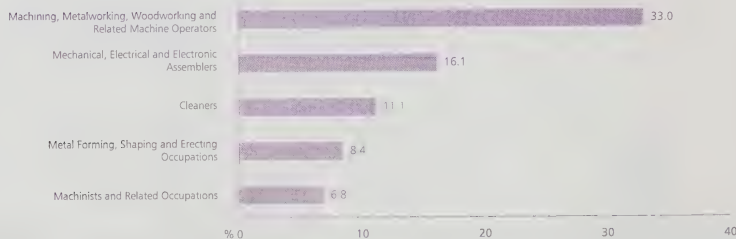


## of Graduates\*

\* Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



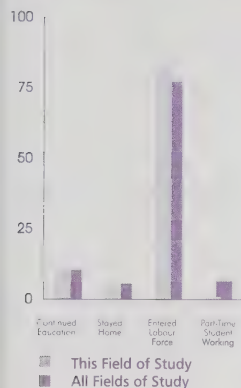
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	67%	74%
Are they satisfied with their work?	91%	92%
Does their work directly match their training?	39%	47%
Do they feel overqualified for their work?	41%	36%

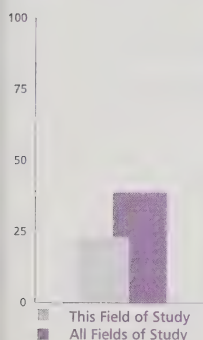
## Where Did They Go?

1992



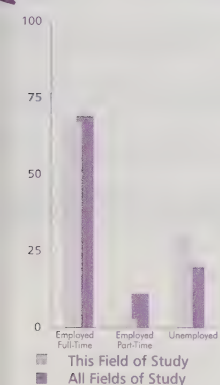
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 730 students received a diploma in manufacturing engineering technologies from a trade/vocational college. Most graduates found jobs as sheet metal workers, fabricated metal products workers, or mechanical or electrical equipment assemblers. Graduates are generally employed in the manufacturing or construction industries. Information from various graduate surveys shows that:

- Seven out of 10 graduates found employment, usually full-time; the unemployment rate for these graduates is one and a half times higher than the average rate for other trade/vocational graduates.
- Two years after graduation, full-time earnings are above the average for other trade/vocational graduates but increase at about the average rate for the next three years.
- Women account for approximately 24% of graduates, compared with 18% about 10 years ago.
- Although sheetmetal work is a fairly specialized trade, these graduates work with welding, machinist and heavy equipment technologies graduates.
- Very few graduates change jobs. The majority of those employed in metalworking two years after graduation are in the same trade three years later. The same is true for graduates working as textile machine operators or as mechanics.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve and become fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to increase as quickly. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more success when searching for employment as machinists, metalworkers and woodworkers than as trades helpers and labourers. The labour market conditions for these occupations follow from the fact that they are concentrated in the metal fabricating and motor vehicle parts industries which are expected to exhibit strong growth over the remainder of the decade.

**See also:** This Field of Study Code: T315. Related Code: C310.  
Vol. 1 Occupations Cross-index: 723, 726, 948, 951, 961.

## Work Prospects

1995 to 2000





# Mechanical Engineering Technologies - Other

Trade/Vocational College (7 months)

## Program of Study

Students receive training in aircraft, marine and agricultural equipment mechanics and in hydraulics.

- This program is offered in every province.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

Full-Time Earnings

1992

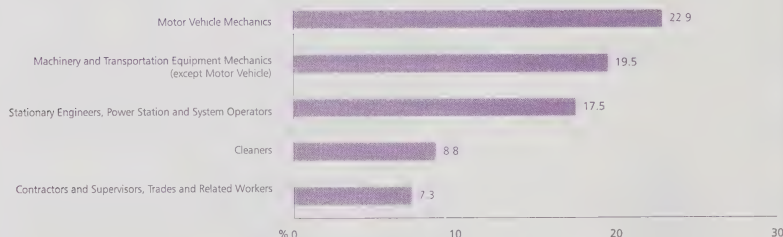


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

Occupations of Graduates

1992



Graduates Speak Out

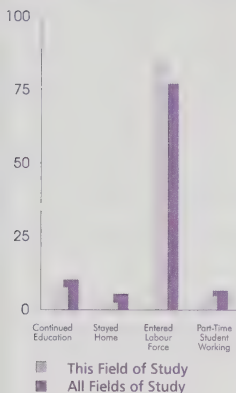
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	72%	74%
Are they satisfied with their work?	91%	92%
Does their work directly match their training?	50%	47%
Do they feel overqualified for their work?	35%	36%



## Where Did They Go?

1992



## After Graduation

In 1994, 2,200 students received a diploma in other mechanical engineering technologies from a trade/vocational college. Graduates often find employment as stationary engineers or stationary equipment repairers. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and less than one out of 20 found part-time employment; the unemployment rate for these graduates is below the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are much higher than the average for other trade/vocational graduates but increase at about the average rate over the next three years.
- Women account for approximately 3% of graduates, compared with 4% about 10 years ago.
- These graduates often find work in the same occupations as graduates of heavy equipment mechanics programs, other industrial engineering technologies, and electrical/electronic engineering technologies.
- Relatively few graduates change jobs. The majority of those employed as stationary engineers two years after graduation are in the same jobs three years later. The same is true for graduates employed in repairing other types of equipment or operating passenger or service elevators two years after graduation.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average and falling unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced workers will be intense.
- These graduates will have more difficulty when searching for employment as stationary engineers and power station operators than as motor vehicle mechanics or machinery and transport equipment mechanics. These graduates are concentrated in the retail and wholesale trade industries, which are expected to exhibit about average growth over the remainder of the decade.

See also: This Field of Study Code: T316. Related Code: C312.  
Vol. 1 Occupations Cross-index: 731, 732, 735, 743, 951.

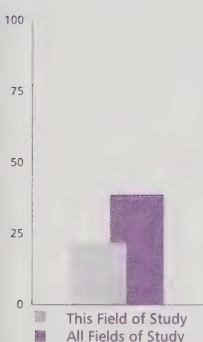
## Work Prospects

1995 to 2000



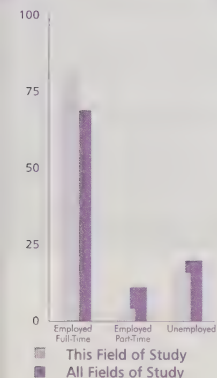
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Transportation Engineering Technologies

Trade/Vocational College (3 months)

## Program of Study

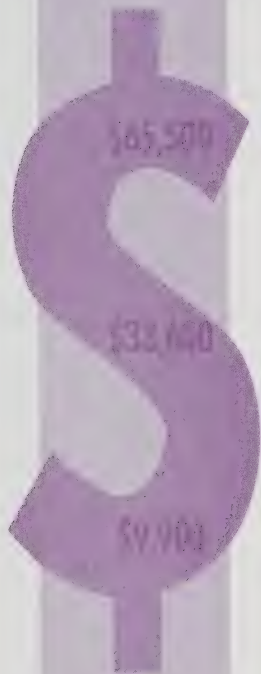
Students receive training in rail, marine, air and motor transportation technologies.

- This program is offered in every province except Prince Edward Island, Manitoba, Alberta and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

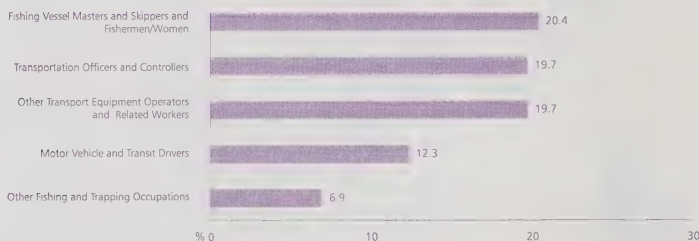


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	80%	74%
Are they satisfied with their work?	96%	92%
Does their work directly match their training?	46%	47%
Do they feel overqualified for their work?	29%	36%

## After Graduation

In 1994, 1,600 students received a diploma in transportation engineering technologies from a trade/vocational college. Most found work in marine, rail or air transportation. Some also work in the fishing industry, and some repair or drive transportation vehicles. Information from various graduate surveys shows that:

- Less than two out of three graduates found full-time employment and none found part-time employment; the unemployment rate for these graduates is almost twice the average rate for other trade/vocational graduates.
- Two years after graduation, full-time earnings are much higher than the average for other trade/vocational graduates, but increases at a below average rate over the next three years.
- Women account for approximately 7% of graduates, compared with 3% about 10 years ago.
- Graduates employed in marine transportation work with graduates from other mechanical engineering and primary technologies.
- Very few graduates change jobs. The majority of those employed in teaching or in marine or motor transportation two years after graduation are in the same fields three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an above average and rising unemployment rate. Their earnings are high but declining relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

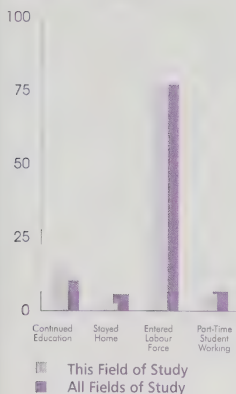
Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as masters and skippers of fishing vessels and in air transport occupations than as transit drivers, transport equipment operators or motor vehicle mechanics. The labour market conditions for the former occupations follow from the fact that they are concentrated in the fishing, trapping and air transportation industries which are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: T317. Related Code: C314.  
Vol. 1 Occupations Cross-index: 227, 732, 741, 743, 826.

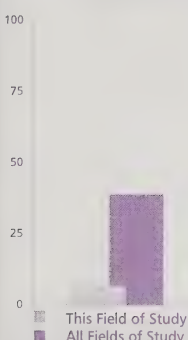
### Where Did They Go?

1992



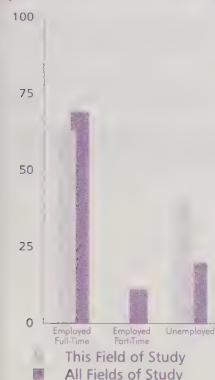
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000





# Welding

Trade/Vocational College (8 months)

## Program of Study

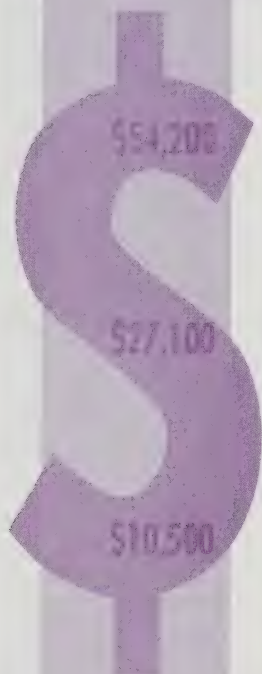
Students receive training in electric, pipeline and shipyard welding and structural steel welding.

- This program is offered in every province.
- Apprenticeship programs are available in some cases.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

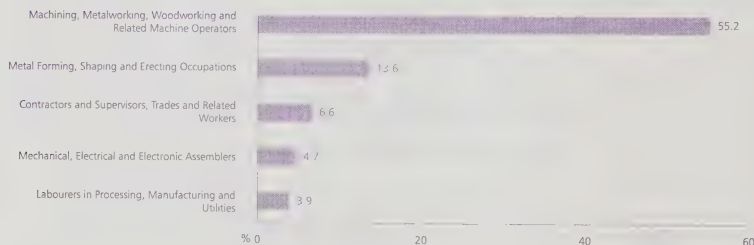


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



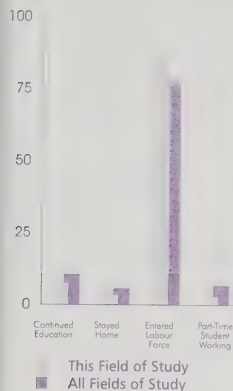
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	71%	74%
Are they satisfied with their work?	94%	92%
Does their work directly match their training?	47%	47%
Do they feel overqualified for their work?	27%	36%

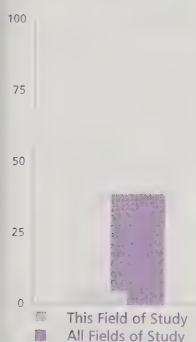
## Where Did They Go?

1992



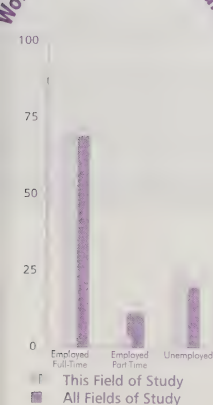
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 2,070 students received a diploma in welding from a trade/vocational college and the majority found work in their field. Graduates are usually employed in the fabricated metal products and service industries. Information from various graduate surveys shows that:

- Three quarters of graduates found employment, in most cases full-time; the unemployment rate for these graduates is well above the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are higher than the average for other trade/vocational graduates and increase at an above average rate for the next three years.
- Women account for approximately 5% of graduates, compared with 2% about 10 years ago.
- These graduates are highly specialized but occasionally face job competition from graduates in manufacturing engineering technologies.
- Few graduates change jobs. The majority of those employed in the metal products occupations two years after graduation are in the same trade three years later. Others are employed in construction or as mechanics two years after graduating. Of this group, those who do change jobs between the third and fifth years after graduation usually become welders.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are high but declining relative to the earnings of other graduates at the same level of studies. The same proportion of these graduates compared to the average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve and become fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to decline slightly. The competition among these graduates and will be weak.
- These graduates will have more difficulty when searching for employment as mechanical and electrical assemblers or labourers than as machinists, metal workers and metal fabricators. The better labour market conditions for the latter occupations follow from the fact that they are concentrated in the metal fabricating, motor vehicle parts and electrical and electronic parts industries. These industries are expected to exhibit strong growth over the remainder of the decade.

See also: This Field of Study Code: T318.  
Vol. 1 Occupations Cross-index: 726, 948, 951, 961.

## Work Prospects

1995 to 2000







# English

## Master's University (1 or 2 years)

### Program of Study

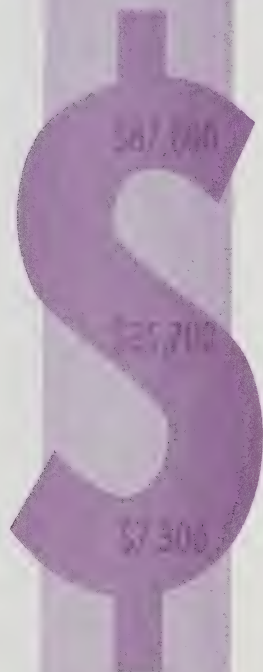
Students enrolled in this program specialize in various authors or in various periods of English literature.

- This program is offered at universities in all provinces except Prince Edward Island and Nova Scotia.
- Some universities offer a short program leading to a certificate or a graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in English or a related discipline.

### Full-Time Earnings

1992

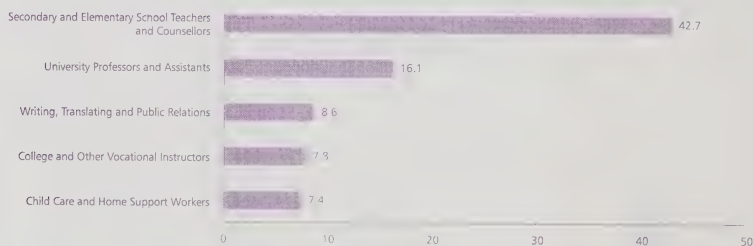


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

1992

#### HOW MANY SAID YES

#### THIS FIELD OF STUDY

#### ALL FIELDS OF STUDY

Would they make the same educational choice again?

88%

83%

Are they satisfied with their work?

91%

95%

Does their work directly match their training?

54%

69%

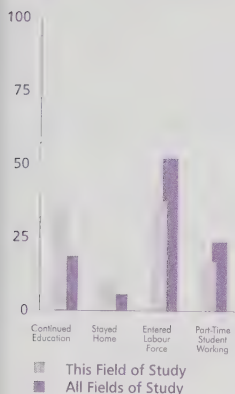
Do they feel overqualified for their work?

70%

57%

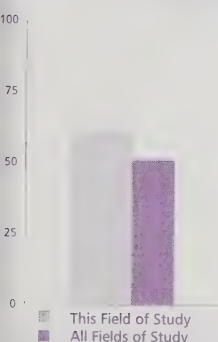
## Where Did They Go?

1992



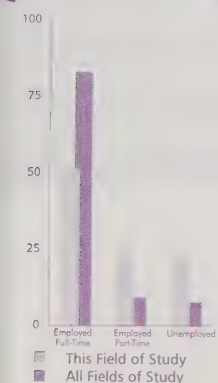
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 490 students received a master's degree in English. Many found jobs as teachers at the university, college, elementary or secondary levels. Others work as writers, editors or journalists. Information from various graduate surveys shows that:

- One half of graduates found full-time employment, and one quarter found part-time employment; the unemployment rate for these graduates is triple the rate for other master's graduates.
- Two years after graduation, full-time earnings are well below the average for other master's graduates, but increase at less than the average rate for the next three years.
- Women account for approximately 61% of graduates, compared with 60% about 10 years ago.
- These graduates often enter the same occupations as those with English undergraduate degrees, university and community college graduates in mass communications and graduates from the educational fields of study.
- Not many graduates employed as teachers, writers or editors change jobs. However, many of those employed as journalists change jobs three to five years after graduation.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a much higher than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become very poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition among these graduates will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and university professors and assistants than as writers, editors, journalists, translators and public relations professionals. The labour market conditions for the former group of occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: M43. Related Code: U43.  
Vol. 1 Occupations Cross-index: 412, 413, 414, 512, 647.

## Work Prospects

1995 to 2000



# French

## Master's University (1 or 2 years)

### Program of Study

Students enrolled in this program expand their knowledge of the French language and its literature or develop their own creative writing skills.

- It is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in French.

### Full-Time Earnings

1992

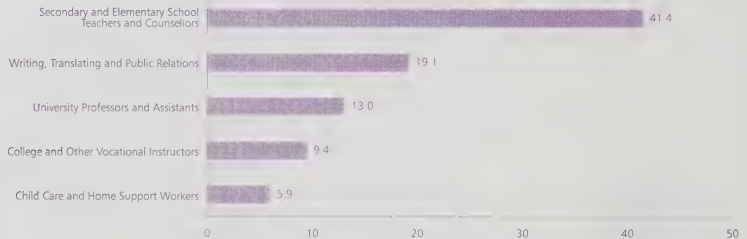


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

### Occupations of Graduates

1992



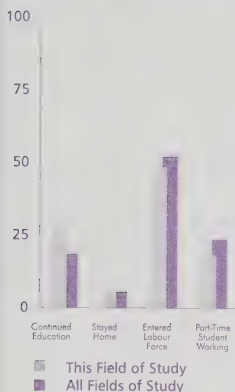
### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	76%	83%
Are they satisfied with their work?	91%	95%
Does their work directly match their training?	60%	69%
Do they feel overqualified for their work?	76%	57%

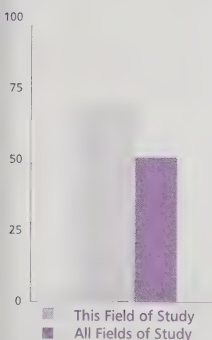
## Where Did They Go?

1992



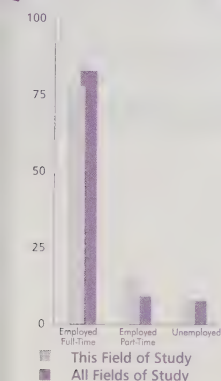
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 200 students received a master's degree in French. Many found work as writers. Others are teachers at the college, elementary or secondary levels. Most are employed in the field of education. Information from various graduate surveys shows that:

- Nearly four out of five graduates found full-time employment, and one out of seven found part-time employment; the unemployment rate for these graduates is about the same as for other master's graduates.
- Two years after graduation, full-time earnings are far below the average for other master's graduates; income growth is well below average for the next three years.
- Women account for approximately 69% of graduates, compared with 67% about 10 years ago.
- Graduates employed as writers often work with graduates from linguistics, translation or interpretation as well as the humanities; those employed in teaching work with teaching graduates.
- Very few graduates change jobs. The majority of those employed in teaching two years after graduation are in the same jobs three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen yet remain fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a faster pace. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and university professors and assistants than as writers, translators, child care and home support workers. The poor labour market conditions for the former group of occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: M44. Related Code: U44.  
Vol. 1 Occupations Cross-index: 412, 413, 414, 512, 647.

## Work Prospects

1995 to 2000

Getting  
Better

Stable

Getting  
Worse

for Graduates

How will  
labour market  
conditions  
change  
for these  
graduates?





# History

## Master's University (1 or 2 years)

### Program of Study

Students specialize in various historical periods or cultures.

- This program is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in history or a related discipline.

### Full-Time Earnings

1992



### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

### Occupations of Graduates

1992



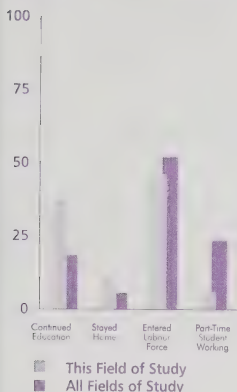
### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	87%	83%
Are they satisfied with their work?	96%	95%
Does their work directly match their training?	44%	69%
Do they feel overqualified for their work?	62%	57%

## Where Did They Go?

1992



## After Graduation

In 1994, 380 students received a master's degree in history and found employment in a wide range of fields. Many work as teachers, librarians, archivists, or policy and program officers. Information from various graduate surveys shows that:

- Two out of three graduates found full-time employment, and nearly one out of five found part-time employment; the unemployment rate for these graduates is twice as high as for other master's graduates.
- Two years after graduation, full-time earnings are far below the average rate for other master's graduates but increase at one and a half times the average rate for the next three years.
- Women account for approximately 43% of graduates, compared with 37% about 10 years ago.
- These graduates often enter the same occupations as undergraduates from library and records sciences, English and history as well as education graduates.
- There is little job changing among graduates employed as teachers or in public organizations such as museums or libraries. However, many of those employed as writers change jobs between the second and fifth years of their careers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a much higher than average unemployment rate. Their earnings are low but stable relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become very poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a faster pace. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as teachers, librarians, archivists and conservators than as library or archival technologists and policy and program officers. The poor labour market conditions for the former group of occupations follow from the fact that they are concentrated in the education and public administration industries which are expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: M45. Related Code: U45.  
Vol. 1 Occupations Cross-index: 412, 414, 511.

## Work Prospects

1995 to 2000

Getting Better

Stable

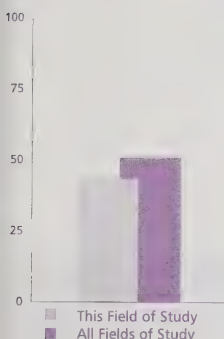
Getting Worse

for Graduates

How will labour market conditions change for these graduates?

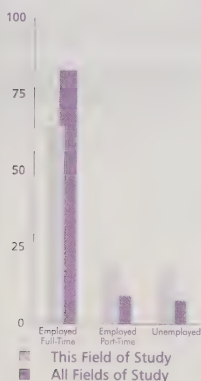
## Percentage of Women

1994



## Work Life of Recent Graduates

1992





# Library and Records Science

Master's University (2 years)

## Program of Study

This field includes general and medical records science, museology, art gallery administration, art conservation and library science.

- This program is offered in Nova Scotia, Quebec, Alberta and British Columbia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree.

## Full-Time Earnings

1992

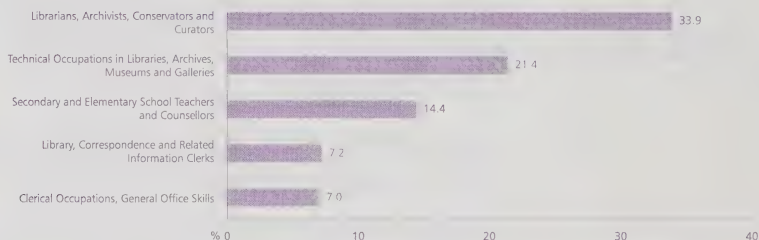


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

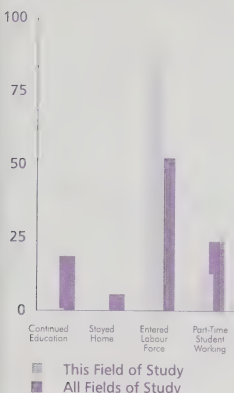
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	89%	83%
Are they satisfied with their work?	96%	95%
Does their work directly match their training?	90%	69%
Do they feel overqualified for their work?	20%	57%



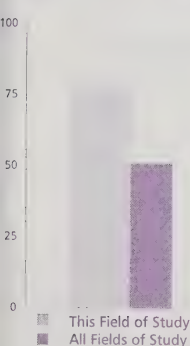
## Where Did They Go?

1992



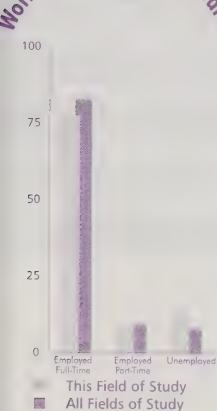
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 540 students received a master's degree in library and records science. The majority of graduates found employment in their field or in teaching. Most graduates are employed by libraries. Information from various graduate surveys shows that:

- More than three out of four graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is much higher than for other master's graduates.
- Two years after graduation, full-time earnings are well below the average for other master's graduates but increase at one and a half times the average rate for the next three years.
- Women account for approximately 79% of graduates, compared with 78% about 10 years ago.
- These graduates often enter the same occupations as university graduates in English, history and other library and records sciences fields of study.
- A fairly significant number of graduates change jobs. While the majority of those working as librarians or archivists two years after graduation are in the same jobs three years later, many find administrative or managerial jobs.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and remain poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as librarians and secondary and elementary school teachers. The worsening labour market conditions for this group of occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: M47.  
Vol. 1 Occupations Cross-index: 145, 412, 414, 511, 521.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?





# Linguistics, Translation and Interpretation

Master's University (2 years)

## Program of Study

People enrolled in this program study theoretical and applied linguistics to understand the development and structure of language, as well as its use and interpretation.

- This program is offered at universities in every province except Prince Edward Island, Newfoundland, Nova Scotia and Saskatchewan.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in linguistics or a related discipline.

## Full-Time Earnings

1992

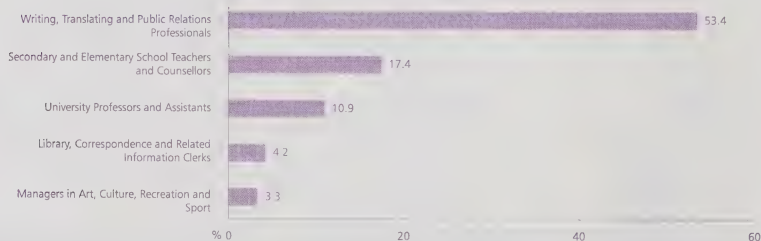


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



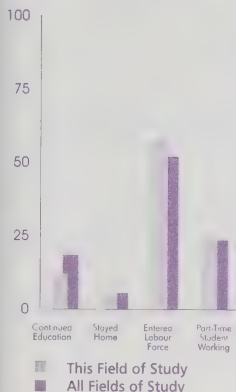
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	77%	83%
Are they satisfied with their work?	94%	95%
Does their work directly match their training?	41%	69%
Do they feel overqualified for their work?	84%	57%

## Where Did They Go?

1992



## After Graduation

In 1994, 160 students received a master's degree in linguistics, translation or interpretation. The majority of graduates found work in their field. They are employed as translators or interpreters and in many cases as writers. Most graduates are employed in the business services sector. Information from various graduate surveys shows that:

- Nearly four out of five graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is higher than for other master's graduates.
- Two years after graduation, full-time earnings are significantly below the average for other master's graduates; income growth is about average for this level of study over the next three years.
- Women account for approximately 78% of graduates, compared with 72% about 10 years ago.
- Graduates often work with graduates with a French degree as translators or interpreters; those employed as writers often work with other humanities graduates.
- Few graduates change jobs. The majority of those employed as translators or interpreters two years after graduation are in the same jobs three years later, although some have entered administrative occupations. Very few of those employed as teachers change jobs between the third and fifth years of their careers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at the same pace. The competition among these graduates will be strong.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers, counsellors and university professors and assistants than as translators. The better labour market conditions for this latter occupation follow from the fact that it is in the professional services, retail and accommodation and food services industries which are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: M48. Related Code: U48.  
Vol. 1 Occupations Cross-index: 412, 414, 512.

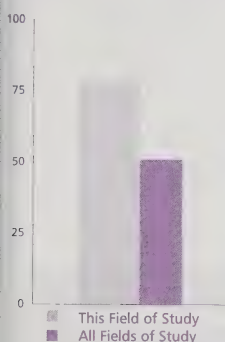
## Work Prospects

1995 to 2000



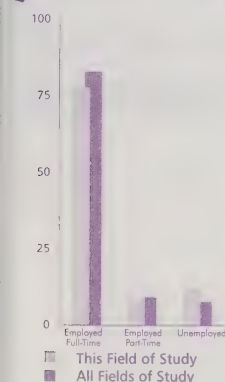
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



# Religious and Theological Studies

Master's University (2 years)

## Program of Study

This program focusses on the role of religion in society and in people's lives, and covers such areas as canon law, pastoral theology, practical theology and systematic theology.

- This program is offered only in Quebec, Ontario, Alberta and Manitoba.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in religious studies or a related discipline.

## Full-Time Earnings

1992

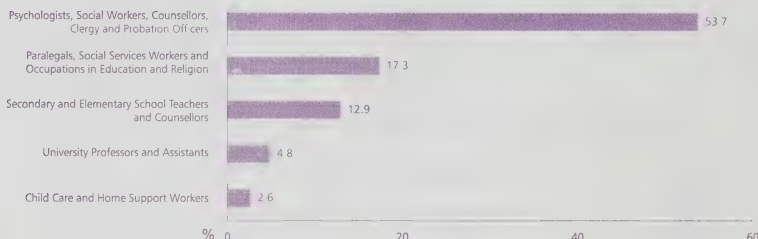


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

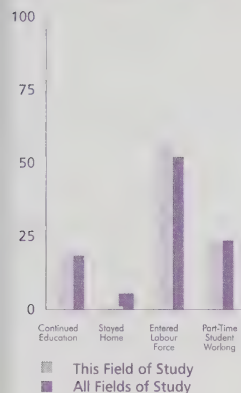
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	93%	83%
Are they satisfied with their work?	95%	95%
Does their work directly match their training?	80%	69%
Do they feel overqualified for their work?	39%	57%



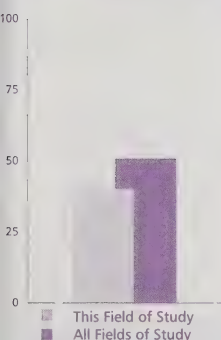
## Where Did They Go?

1992



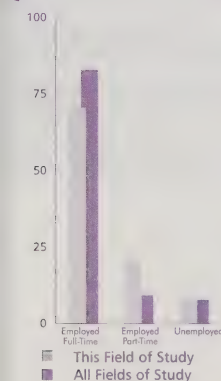
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 490 students received a master's degree in religious and theological studies. The majority found employment in their field. Graduates are usually employed by religious organizations. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and one out of five found part-time employment; the unemployment rate for these graduates is similar to the rate for other master's graduates.
- Two years after graduation, full-time earnings are far below the average for other master's graduates and increase at a below average rate for the next three years.
- Women account for approximately 40% of graduates, compared with 29% about 10 years ago.
- Graduates are highly specialized and do not face significant job competition from graduates in other fields.
- Few graduates change jobs. The majority of those employed in religion two years after graduation are in the same jobs three years later. Some have gone into teaching.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an above average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have difficulty when searching for employment as ministers of religion, social service workers, and secondary and elementary school teachers. The worsening labour market conditions for these occupations follow from the fact that they are concentrated in education and the health and social services industries which are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: M411. Related Code: U411. Vol. 1 Occupations Cross-index: 412, 413, 414, 415, 421.

## Work Prospects

1995 to 2000







# English

## Undergraduate University (3 or 4 years)

### Program of Study

Students in this program study English language and literature, including American and English-Canadian forms.

- English degree programs are offered at universities in every province.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have a high school diploma (Diploma of Collegial Studies in Quebec) with high marks in English and the humanities.

### Full-Time Earnings

1992

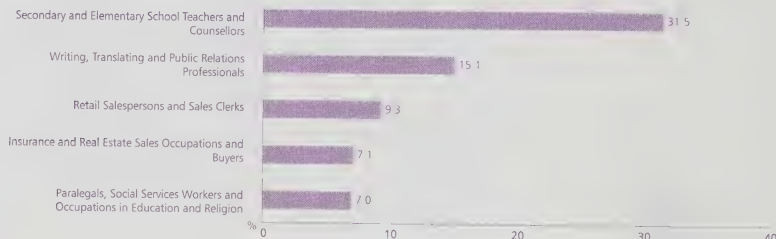


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

1992

#### HOW MANY SAID YES

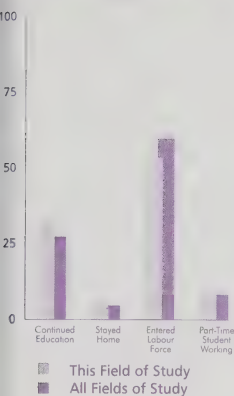
#### THIS FIELD OF STUDY

#### ALL FIELDS OF STUDY

Would they make the same educational choice again?	64%	71%
Are they satisfied with their work?	84%	91%
Does their work directly match their training?	25%	57%
Do they feel overqualified for their work?	48	28%

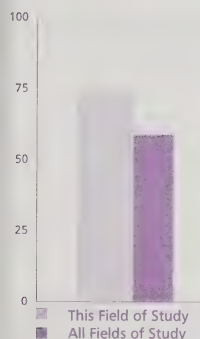
## Where Did They Go?

1992



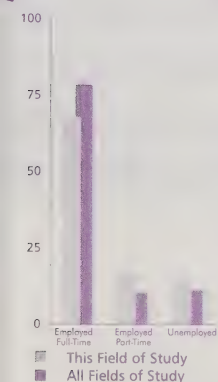
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, about 5,500 students graduated in English. Students employed full-time found jobs in various fields, some as teachers and others as writers. However, most graduates find work in the educational system. Information from various graduate surveys shows that:

- Two out of three graduates found full-time employment, and one out of five found part-time employment. The unemployment rate for English graduates is slightly higher than for other graduates at this level.
- Two years after graduation, full-time earnings are significantly lower than the average for other graduates at this level, although, between two and five years after graduation, income growth is about average.
- Women account for approximately 73% of graduates, compared with 72% about 10 years ago.
- These graduates often enter the same occupations as graduates from the teaching and mass communication fields of study at the university and community college level of study.
- Graduates employed as teachers do not tend to change jobs. However, the opposite is true for graduates working in sales positions two years after graduation. Three years later, many have become teachers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average and rising unemployment rate. Their relative earnings are declining and low compared to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and remain poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers than as writers, journalists and translators. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: U43. Related Code: M43.  
Vol. 1 Occupations Cross-index: 414, 512, 513, 647.

## Work Prospects

1995 to 2000





## Full-Time Earnings

1992



## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

# French

## Undergraduate University (3 or 4 years)

### Program of Study

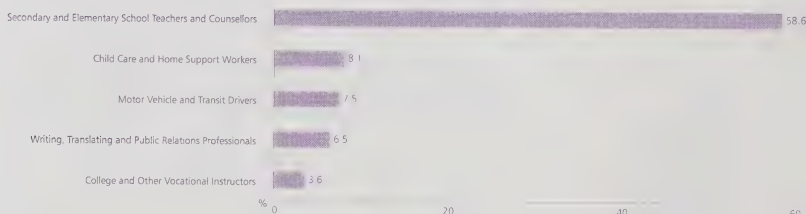
Students enrolled in this program study linguistics as well as French language and literature.

- French degree programs are offered at universities in every province.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with high marks in French and the humanities. Quebec students must have a Diploma of Collegial Studies. Graduates from English cegeps must have high marks in French.

## Occupations of Graduates

1992



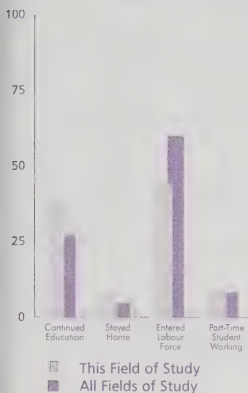
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	68%	71%
Are they satisfied with their work?	95%	91%
Does their work directly match their training?	50%	57%
Do they feel overqualified for their work?	20%	28%

## Where Did They Go?

1992



## After Graduation

In 1994, 2,040 students received an undergraduate degree in French. In most cases, graduates who found full-time work were employed in teaching. Information from various graduate surveys shows that:

- Two out of three graduates found full-time employment, and one out of five found part-time employment; the unemployment rate for French graduates is slightly higher than for other graduates at this level.
- Two years after graduation, full-time earnings are somewhat lower than the average for other graduates at this level; but, between two and five years after graduation, income growth is higher.
- Women account for approximately 82% of graduates, compared with 81% about 10 years ago.
- University and community college graduates in education often find work in the same occupations as these graduates.
- Graduates employed as teachers do not tend to change jobs. However, the opposite is true for the few graduates working as office clerks two years after graduation. Three years after that, these clerks have usually become administrators or library technicians.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average unemployment rate, but it is falling. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen but remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to outpace this growth. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and in counsellor-related occupations than as translators, editors, journalists and child care and home support workers. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: U44. Related Code: M44.  
Vol. 1 Occupations Cross-index: 413, 414, 512, 647.

## Work Prospects

1995 to 2000

Getting Better

Stable

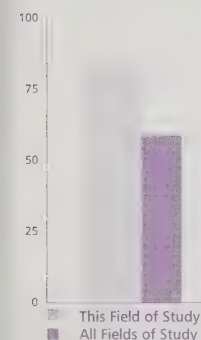
Getting Worse

For Graduates

How will labour market conditions change for these graduates?

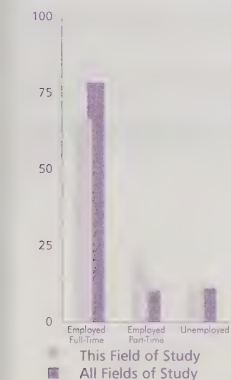
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# History

## Undergraduate University (3 or 4 years)

### Program of Study

This program includes the study of Canadian history or the history of other countries.

- History programs are offered at universities in every province.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with high marks in the humanities. Quebec students must have a Diploma of Collegial Studies.

### Full-Time Earnings

1992

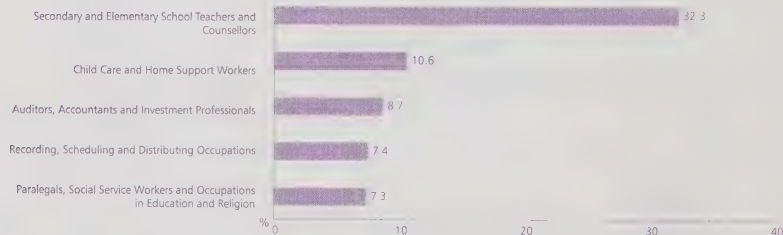


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

### Occupations of Graduates

1992



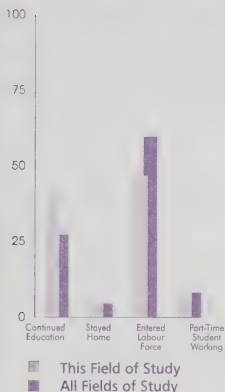
### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	63%	71%
Are they satisfied with their work?	82%	91%
Does their work directly match their training?	22%	57%
Do they feel overqualified for their work?	50%	28%

## Where Did They Go?

1992



## After Graduation

In 1994, 4,070 students received an undergraduate degree in history. Graduates employed full-time found work in a wide range of fields, including teaching. Most are employed in the education sector. Information from various graduate surveys shows that:

- Three out of four graduates found full-time employment, and one out of seven found part-time employment. The unemployment rate for history graduates is similar to that for other graduates at this level.
- Two years after graduation, full-time earnings are significantly lower than the average for other graduates at this level; but, between two and five years after graduation, earnings increase at one and a half times the average rate.
- Women represent approximately 48% of graduates, the same as about 10 years ago.
- University and community college graduates in education and commerce often find work in the same occupations as these graduates.
- Few of the history graduates who are employed as teachers change jobs. The same is true for those employed in administrative positions two years after graduation.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate, but it is falling. Their relative earnings are stable but low compared to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen but still remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to exceed this demand. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and counsellors than as child care and home support workers. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education and public administration sectors. These industries are expected to exhibit average to below average growth over the remainder of the decade.

**See also:** This Field of Study Code: U45. Related Code: M45.  
Vol. 1 Occupations Cross-index: 122, 414, 647.

## Work Prospects

1995 to 2000

Getting  
Better

Stable

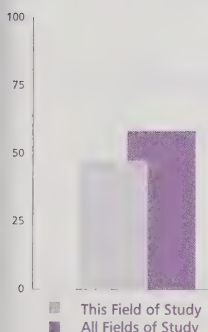
Getting  
Worse

For Graduates

How will  
labour market  
conditions  
change  
for these  
graduates?

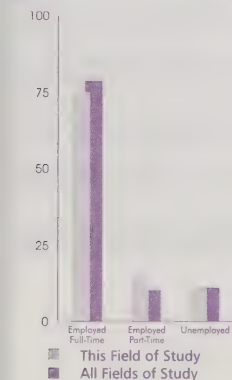
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



# Linguistics, Translation and Interpretation

Undergraduate University (3 or 4 years)

## Program of Study

This program includes the study of the analytical, descriptive and historical bases of language.

- This program is offered at universities in every province except Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed high school with high marks in French, English and the humanities. Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992

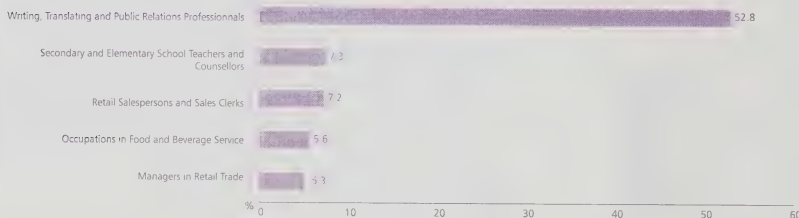


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



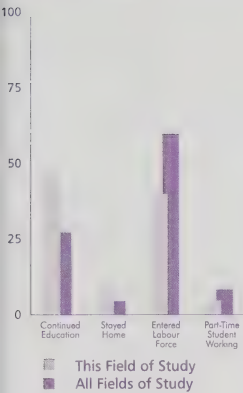
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	57%	71%
Are they satisfied with their work?	93%	91%
Does their work directly match their training?	35%	57%
Do they feel overqualified for their work?	28%	28%

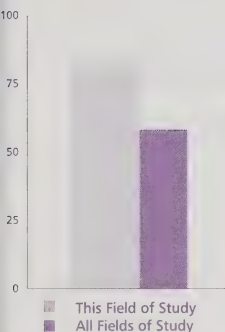
## Where Did They Go?

1992



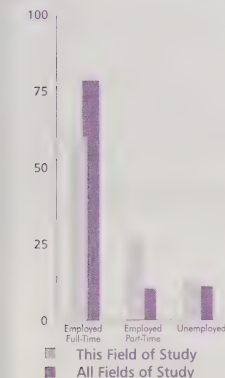
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 630 students graduated in linguistics, translation and interpretation. Most graduates employed full-time are working as writers, many in the telecommunications industry. Information from various graduate surveys shows that:

- Three out of five graduates found full-time employment, and one out of four found part-time employment. The unemployment rate for these graduates is slightly higher than for other graduates at this level.
- Two years after graduation, full-time earnings are lower than the average for all other graduates at this level; between two and five years after graduation, income growth is one and a half times the average rate.
- Women account for about 83% of graduates, compared with 81% about 10 years ago.
- University graduates in French, English and other humanities often find work in the same occupations as these graduates.
- Few graduates who are employed as writers change jobs, but the opposite is true for graduates employed in jobs not related to their education. The majority change jobs between the third and fifth years of their careers, mainly to work as writers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate but it is falling. Their relative earnings are declining and low compared to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be about the same as in the recent past.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and counsellors than as writers, editors, journalists and translators. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in the professional services, retail and accommodation and food services industries. These industries are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: U48. Related Code: M48.  
Vol. 1 Occupations Cross-index: 145, 414, 512.

## Work Prospects

1995 to 2000







# Mass Communications

Undergraduate University (3 or 4 years)

## Program of Study

This program covers the evolution of communications and the role of the media in modern society.

- It is offered at universities in every province except Newfoundland, Prince Edward Island and Saskatchewan.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with high marks in English (French) and the humanities. Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992

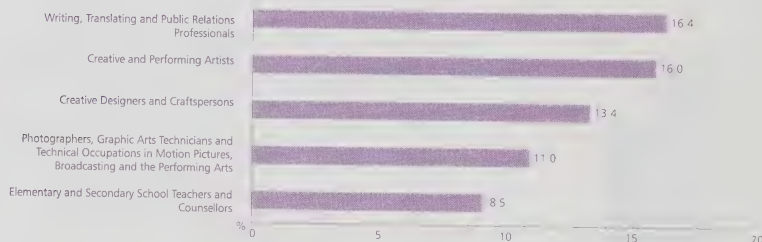


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



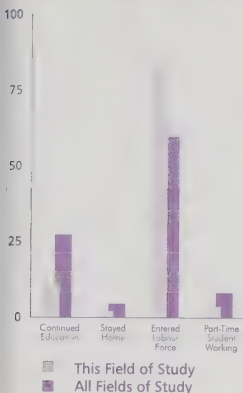
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	65%	71%
Are they satisfied with their work?	87%	91%
Does their work directly match their training?	38%	57%
Do they feel overqualified for their work?	52%	28%

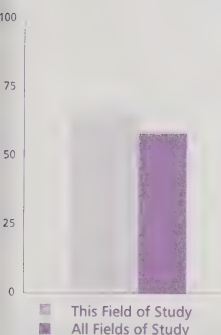
## Where Did They Go?

1992



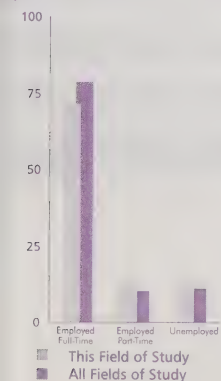
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,400 students received an undergraduate degree in mass communications. Graduates working full-time found jobs in a variety of fields, especially in advertising, or radio and television. Information from various graduate surveys shows that:

- Seven out of ten graduates found full-time employment, and one out of seven found part-time employment. The unemployment rate for mass communications graduates is higher than for other graduates at this level.
- Two years after graduation, full-time earnings are lower than the average for other graduates at this level; between two and five years after graduation, income growth is at half the average rate.
- Women account for approximately 66% of graduates, compared with 52% about 10 years ago.
- University and community college graduates in English, French and applied arts often find work in the same occupations as these graduates.
- A large number of mass communications graduates change jobs, except for those in management positions; most graduates working as administrators two years after graduation are in management three years later. Graduates who find jobs as writers are often employed in management or in radio or television by the five-year mark of their careers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their relative earnings are declining and are low compared to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and remain poor.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a faster pace. The competition among these graduates will be strong.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and counsellors than as writers, editors, journalists and photographic artists. The labour market conditions for these occupations follow from the fact that they are concentrated in the professional services, amusement and recreation industries. These industries are expected to exhibit average growth over the remainder of the decade.

**See also:** This Field of Study Code: U49. Related Code: C43.  
Vol. 1 Occupations Cross-index: 414, 512, 513, 522, 524.

## Work Prospects

1995 to 2000





# Religious and Theological Studies

Undergraduate University (3 or 4 years)

## Program of Study

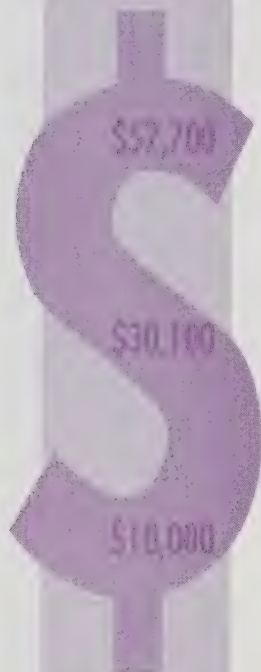
This program encompasses the history of religion, biblical studies, theology, philosophy, ethics and canon law.

- It is offered at universities in all provinces except Prince Edward Island.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have a high school diploma (Diploma of Collegial Studies in Quebec).

## Full-Time Earnings

1992

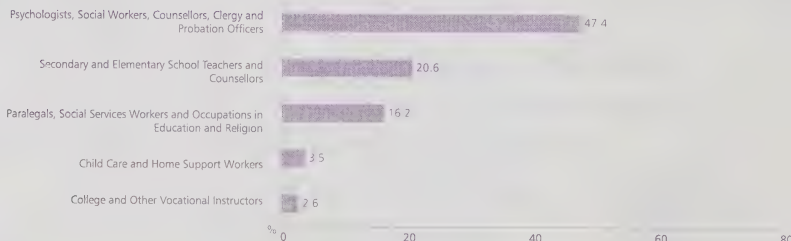


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

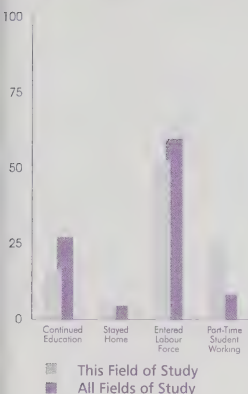
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	82%	71%
Are they satisfied with their work?	97%	91%
Does their work directly match their training?	60%	57%
Do they feel overqualified for their work?	28%	28%



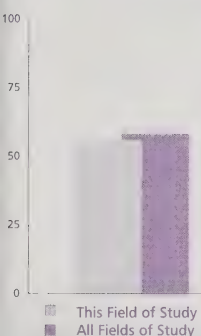
## Where Did They Go?

1992



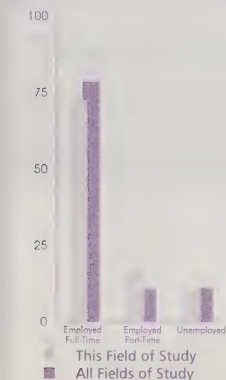
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,270 students graduated in religious studies and theology. Most of the graduates working full-time found jobs related to their field, usually with religious or social services organizations. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and less than one out of six found part-time employment. The unemployment rate for these graduates is very similar to that for other graduates at this level.
- Two years after graduation, full-time earnings are slightly lower than the average for other graduates at this level and, between two and five years after graduation, increase at a somewhat slower pace.
- Women account for approximately 56% of graduates, compared with 49% about 10 years ago.
- Master's graduates from this field of study often find work in the same occupations as these graduates.
- These graduates do not tend to change jobs to any great degree. Most of those who are in the major occupational group of psychologists, social workers, counsellors, clergy and probation officers two years after graduation still work in the same field three years later. Some have found management or administrative positions. The situation is identical for those who enter teaching. Five years after graduation, some have become managers or administrators.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average but rising unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While new job openings are expected to be about the same as over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as ministers of religion, teachers and in other religious occupations than as child care and home support workers or in administrative and regulatory occupations. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education, and health and social service industries which are expected to exhibit weak growth over the remainder of the decade.

See also: This Field of Study Code: U411. Related Code: M411  
Vol. 1 Occupations Cross-index: 413, 414, 415, 421, 647.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?





# Mass Communications

Career Program, Community College (2 years)

## Program of Study

Students enrolled in mass communications receive training in cinematography, film production, animation, radio and television broadcasting, and journalism.

- This program is offered at community colleges in every province except Prince Edward Island, Nova Scotia and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French) and preferably geography and history. In most cases, applicants must undergo an interview and an English (French) proficiency test, and submit letters of recommendation and samples of their work.

## Full-Time Earnings

1992

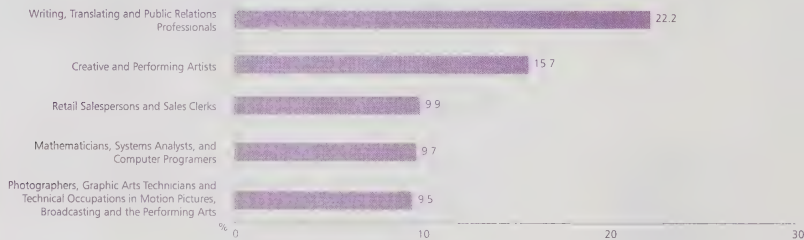


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



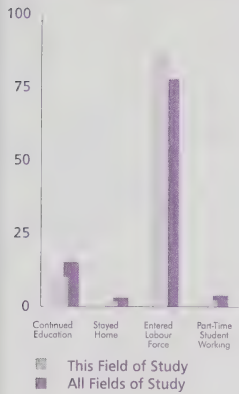
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	71%	74%
Are they satisfied with their work?	88%	93%
Does their work directly match their training?	46%	61%
Do they feel overqualified for their work?	41%	34%

## Where Did They Go?

1992



## After Graduation

In 1994, 1,710 students graduated in mass communications. They are usually employed as writers and editors, or in public relations. Some find work in the creative and performing arts, and retail sales. These graduates often work in printing and publishing, business services and the radio and television industry. Information from various graduate surveys shows that:

- Four out of five graduates found full-time work and less than one out of 10 found part-time employment; the unemployment rate for graduates is about the same as for other community college graduates.
- Two years after graduation, full-time earnings are lower than the average for other community college graduates; between two and five years after graduation, income growth is one and a half times the average rate.
- Women account for approximately 46% of graduates, compared with 45% about 10 years ago.
- These graduates often find jobs in the same occupations as people with a university degree in mass communications.
- The majority of graduates working in radio and television two years after graduation are in the same field three years later. The majority of those who were writers two years after graduation did not change jobs. Graduates working in photography two years after graduation were much more likely to change jobs. More than two thirds became teachers or video or sound technicians.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition among these graduates will be about average.
- These graduates will have more success when searching for employment as writers, editors, journalists or public relations professionals. The labour market situation follows from the fact that these occupations are concentrated in the retail trade, amusement and recreation and radio and television industries which are expected to exhibit average employment growth over the remainder of the decade.

See also: This Field of Study Code: C42. Related Code: U49.  
Vol. 1 Occupations Cross-index: 512, 513, 522, 524.

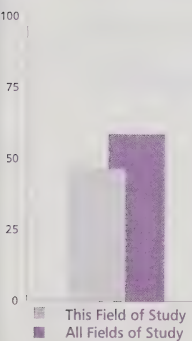
## Work Prospects

1995 to 2000



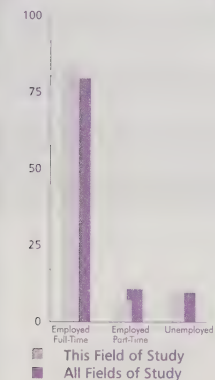
## Percentage of Women

1994



## Work Life of Recent Graduates

1992





# Basic Medical Sciences

Master's University (2 to 6 years)

## Program of Study

Students specialize in such areas as anatomy, biochemistry, biophysics, embryology, endocrinology, genetics, pharmacology and physiology.

- This program requires two to six years of study depending on the area of specialization and is offered in Nova Scotia, Quebec, Ontario, Alberta, Manitoba and British Columbia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in their area of specialization or a related field. They must also pass an interview and a graduate admissions test, provide letters of recommendation and take a medical examination.

## Full-Time Earnings

1992

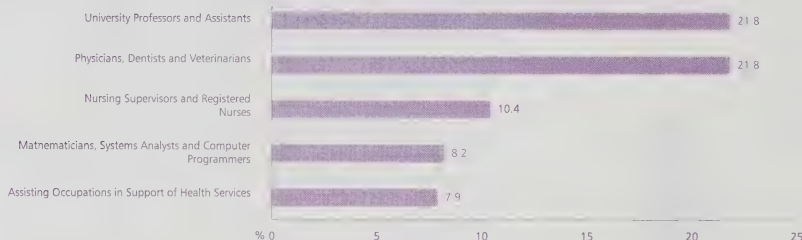


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

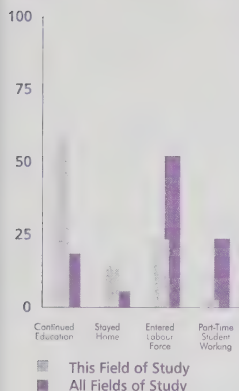
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	69%	83%
Are they satisfied with their work?	93%	95%
Does their work directly match their training?	48%	69%
Do they feel overqualified for their work?	55%	57%



## Where Did They Go?

1992



## After Graduation

In 1994, 350 students received a master's degree in basic medical sciences. They found work in a variety of fields and are employed as teachers, doctors or nurses. Most graduates teach at the university level. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment, and one out of eight found part-time employment; the unemployment rate for these graduates is lower than for other master's graduates.
- Two years after graduation, full-time earnings are below the average for other master's graduates and increase very slowly over the next three years.
- Women account for approximately 53% of graduates, compared with 39% about 10 years ago.
- These graduates often enter the same occupations as graduates from biology, chemistry, physics, pharmacy and rehabilitation medicine.
- Few graduates seem to change jobs. The majority of those employed as teachers or doctors two years after graduation are in the same jobs three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a below average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and yet remain good.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a faster pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as university professors and assistants, nurses, nursing aides and medical laboratory technologists. The worsening labour market conditions for these occupations follow from the fact that they are concentrated in the education and health services industries which are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: M51.  
Vol. 1 Occupations Cross-index: 221, 311, 315, 321, 412.

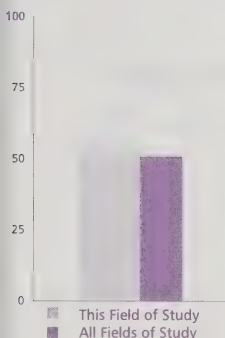
## Work Prospects

1995 to 2000



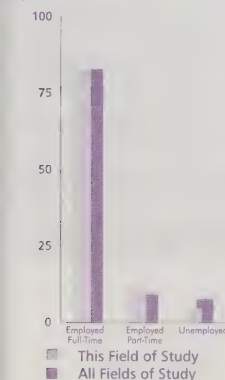
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Health - Other

## Master's University (2 years)

### Program of Study

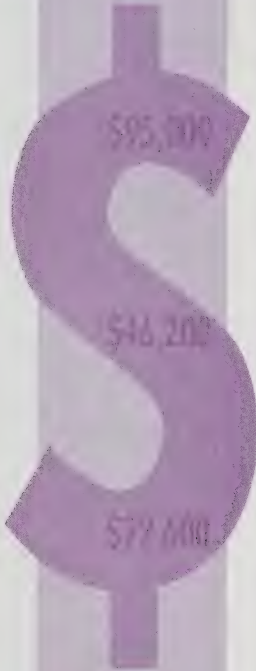
Students specialize in such disciplines as microbiology, immunology, pathology, optometry, community medicine and hygiene, public health, preventive medicine, medical laboratory and science, and radiological technology.

- This program is offered at universities in every province except Prince Edward Island and Newfoundland.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in a discipline closely related to their chosen specialization. An interview, a medical examination and letters of recommendation are also required.

### Full-Time Earnings

1992

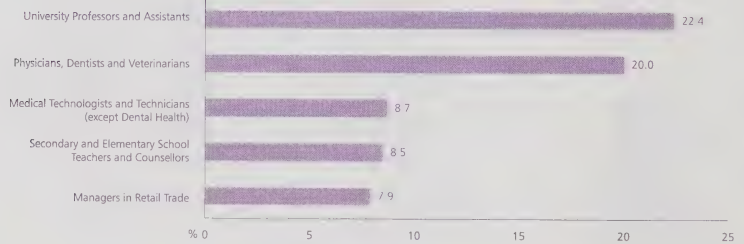


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

### Occupations of Graduates

1992



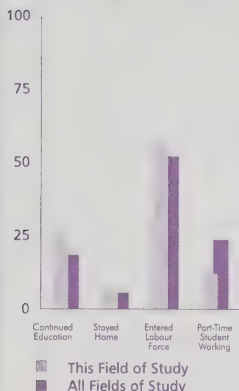
### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	88%	83%
Are they satisfied with their work?	99%	95%
Does their work directly match their training?	78%	69%
Do they feel overqualified for their work?	41%	57%

## Where Did They Go?

1992



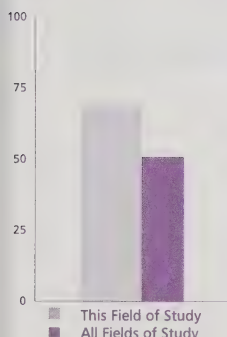
## After Graduation

In 1994, 320 students received a master's degree in this program. Many found work in laboratories in administrative positions or as doctors or teachers. Most graduates are employed in the hospital industry. Information from various graduate surveys shows that:

- Nearly nine out of 10 graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is much below the average for master's graduates.
- Two years after graduation, full-time earnings are just above the average for other master's graduates and increase at about the average rate for the next three years.
- Women account for approximately 69% of graduates, compared with 52% about 10 years ago.
- These graduates often work in the same occupations as biology, medical laboratory technologists and other health service related graduates.
- A fairly significant number of graduates employed as administrators change jobs three to five years after graduation. Some become teachers. Those working directly in the health care industry do not change jobs to the same extent. Very few had changed jobs by the fifth year of their careers.

## Percentage of Women

1994



## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

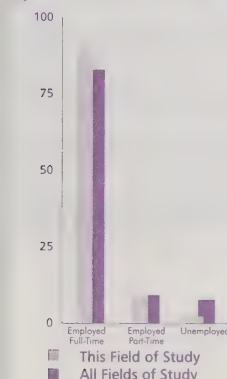
- Recent graduates from this field of study have had a much lower than average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen yet remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as university professors and assistants, and secondary and elementary school teachers than as medical technologists and doctors. The labour market conditions for these occupations follow from the fact that they are concentrated in the education and health industries which are expected to exhibit below average growth over the remainder of the decade.

## Work Life of Recent Graduates

1992



**See also:** This Field of Study Code: M53. Related Code: U53.  
Vol. 1 Occupations Cross-index: 311, 321, 412, 414.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?



# Medical/Surgical Specialties

Master's University (2 to 6 years)

## Program of Study

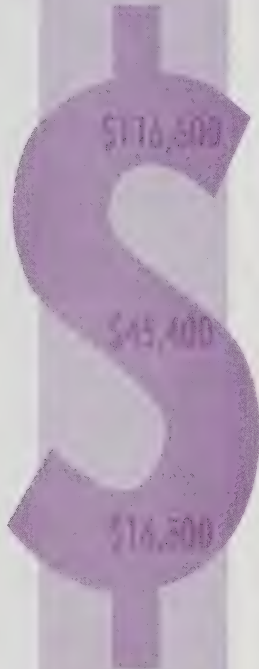
Students specialize in cardiology, anesthesiology, dermatology, family and internal medicine, brain surgery, heart surgery, neurosurgery, obstetrics and gynecology, ophthalmology and plastic surgery.

- This program is two to six years in length depending on the area of specialization, and is offered in Nova Scotia, Quebec, Alberta, Manitoba and British Columbia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Individuals can practise medicine once they have completed their undergraduate studies, finished one or two years of internship and passed the necessary licensing examinations. Applicants must pass an interview and a graduate admissions test, provide letters of recommendation and undergo a medical examination.

## Full-Time Earnings

1992

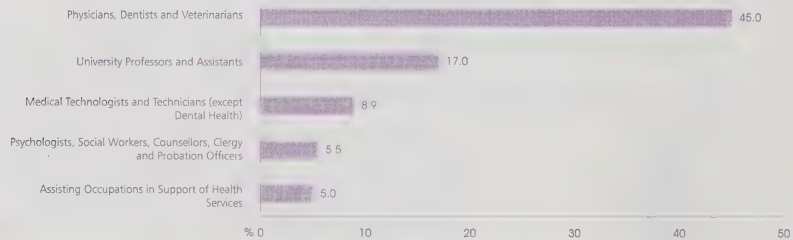


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

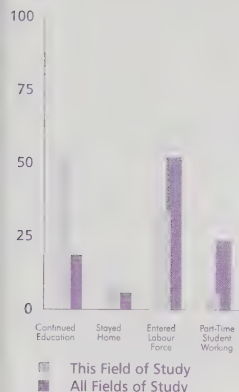
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	79%	83%
Are they satisfied with their work?	100%	95%
Does their work directly match their training?	69%	69%
Do they feel overqualified for their work?	45%	57%



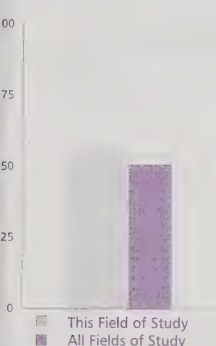
## Where Did They Go?

1992



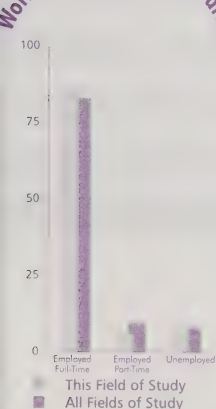
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 100 students received a master's degree in medical and surgical specialties. Most graduates are doctors, but some are employed as teachers. Graduates are usually employed in the hospital industry. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment, and more than one out of 20 found part-time employment; the unemployment rate for these graduates remains somewhat higher than for other master's graduates.
- Two years after graduation, full-time earnings are about the same as the average for other master's graduates but increase very slowly for the next three years.
- Women account for approximately 55% of graduates, compared with 33% about 10 years ago.
- Graduates rarely face competition from other graduates for jobs as doctors or teachers.
- Very few graduates change jobs. Almost all of those employed as doctors or teachers two years after graduation are in the same jobs three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an above average unemployment rate. Their earnings are average but declining relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen yet remain fair.

- Job openings are expected to be less numerous than over the previous five-year period, and the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as university professors and assistants and as physicians and surgeons than as medical laboratory workers. The labour market conditions for these occupations follow from the fact that they are concentrated in the education and health industries which are expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: M54. Related Code: U55.  
Vol. 1 Occupations Cross-index: 311, 312, 321, 412.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?





# Nursing

Master's University (2 years)

## Program of Study

Students enrolled in this program specialize in surgical nursing, geriatric nursing, obstetric nursing, pediatric nursing, psychiatric nursing, intensive care and emergency nursing or public health nursing.

- It is offered at universities in every province except Prince Edward Island and New Brunswick.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an undergraduate degree in nursing or the equivalent. Applicants must have high marks, provide letters of recommendation and pass an interview.

## Full-Time Earnings

1992

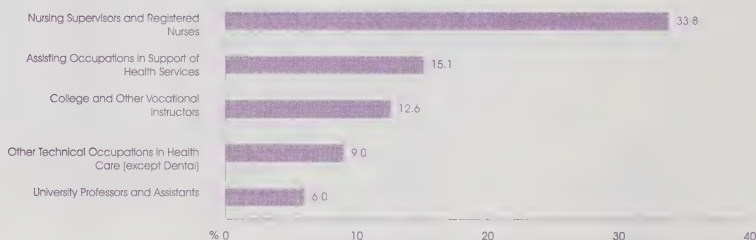


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

THIS FIELD OF STUDY ALL FIELDS OF STUDY

Would they make the same educational choice again? 86% 83%

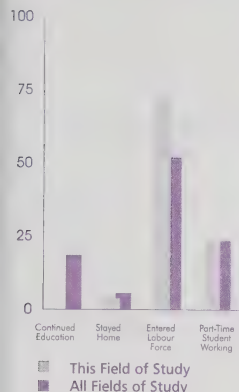
Are they satisfied with their work? 99% 95%

Does their work directly match their training? 89% 69%

Do they feel overqualified for their work? 32% 57%

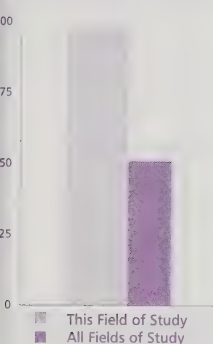
## Where Did They Go?

1992



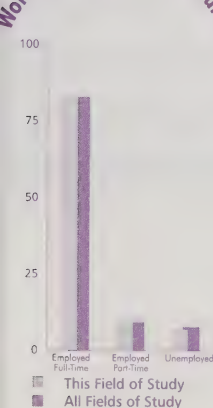
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 220 students received a master's degree in nursing. The majority found work in their field. Others are employed in teaching. These graduates are usually employed by hospitals. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is slightly lower than for other master's graduates.
- Two years after graduation, full-time earnings are somewhat higher than the average for other master's graduates and increase at an above average rate over the next three years.
- Women account for approximately 99% of graduates, compared with 91% about 10 years ago.
- These graduates often enter the same occupations as other nursing and related health care graduates from the university and community college systems.
- A significant number of graduates change jobs. Many of those employed as nurses become administrators or teachers between the third and fifth years after graduation. Similarly, those employed as teachers often become nurses or administrators between the third and fifth years after graduation.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen yet remain good.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as college and vocational instructors, and university professors and assistants than as nurses and nurse aides. The labour market conditions for these occupations follow from the fact that they are concentrated in the education, health and hospital industries which are expected to exhibit weak growth over the remainder of the decade.

See also: This Field of Study Code: M56. Related Code: U56.  
Vol. 1 Occupations Cross-index: 315, 323, 412, 413, 647.

## Work Prospects

1995 to 2000



# Dentistry

Undergraduate University (4 or 5 years)

## Program of Study

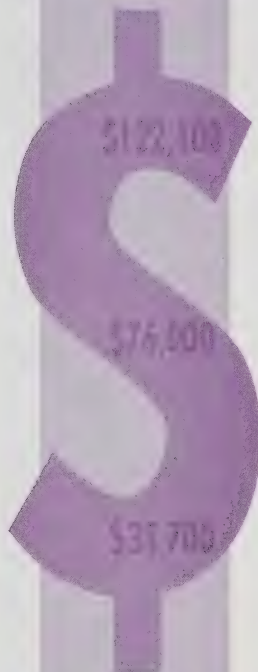
Students entering this program can specialize in dental surgery, dental hygiene, oral surgery and orthodontistry.

- Dentistry is offered at major universities in most provinces except Prince Edward Island, Newfoundland and New Brunswick.

**Prerequisites:** Enrolment in this program is limited and admission standards are high. Applicants must have completed secondary school. Quebec students must have a Diploma of Collegial Studies with high marks in science. Applicants must be interviewed, undergo a medical examination and pass a dexterity test developed by the Canadian Dental Association.

## Full-Time Earnings

1992

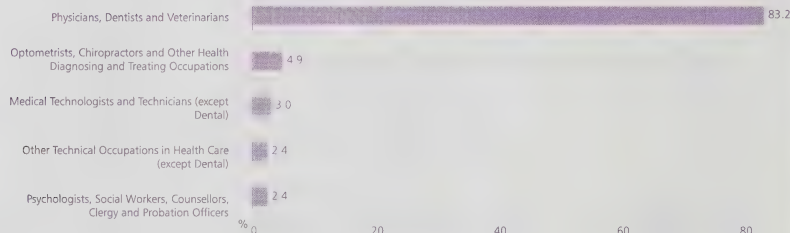


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



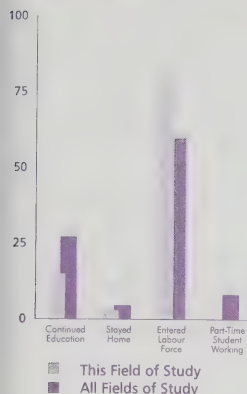
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	89%	71%
Are they satisfied with their work?	100%	91%
Does their work directly match their training?	96%	57%
Do they feel overqualified for their work?	50%	28%

## Where Did They Go?

1992



## After Graduation

In 1994, 550 students received an undergraduate degree in dentistry. Almost all graduates found work in their field and are employed in the health sector. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time work, and one out of 10 found part-time work. There is virtually no unemployment among dentistry graduates.
- Two years after graduation, full-time earnings are more than double the average rate for other graduates at this level; between three and five years after graduation, earnings for dentists change only marginally.
- Women account for approximately 38% of graduates, compared with 21% about 10 years ago.
- Given their highly specialized training, dentistry graduates rarely encounter job competition from graduates in other fields.
- These graduates do not change jobs; those working as dentists or denturists two years after graduation are still practising three years later.

## Work Prospects

The current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their relative earnings are declining but high relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen but remain good.

- Job openings are expected to be slightly less numerous than over the previous five-year period, and the number of people with the requisite skills for these jobs is expected to increase substantially. The competition among these graduates will be intense.
- These graduates will experience little difficulty when searching for employment as dentists. The slightly worsening labour market conditions follow from the fact that there will be an oversupply of graduates even though they are concentrated in the private health practices and medical lab industries which are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: U52.  
Vol. 1 Occupations Cross-index: 311.

## Work Prospects

1995 to 2000

Getting Better

Stable

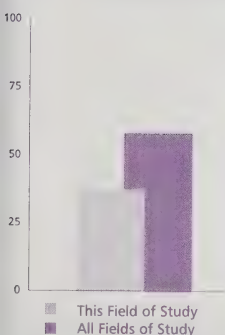
Getting Worse

For Graduates

How will labour market conditions change for these graduates?

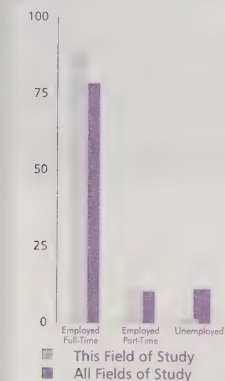
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Health - Other

## Undergraduate University (2 years)

### Program of Study

Students can specialize in dental hygiene, microbiology, social and preventive medicine, optometry, immunology or laboratory science.

- This program is offered at universities in most provinces except Newfoundland, Prince Edward Island and New Brunswick.

**Prerequisites:** Admission standards vary depending on the field of study. In general, applicants must have a high school diploma (Diploma of Collegial Studies in Quebec). Some universities require students to have a previous undergraduate degree with high marks in science. Students must also be interviewed, pass a medical examination and an aptitude test, and provide letters of recommendation.

### Full-Time Earnings

1992

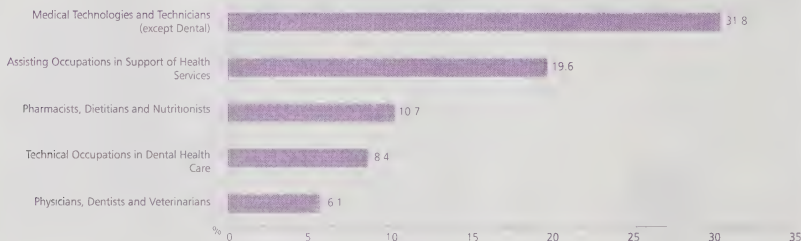


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

### Occupations of Graduates

1992



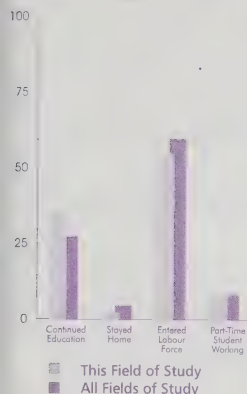
### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	79%	71%
Are they satisfied with their work?	94%	91%
Does their work directly match their training?	53%	57%
Do they feel overqualified for their work?	40%	28%

## Where Did They Go?

1992



## After Graduation

In 1994, 370 students received an undergraduate degree in this program. Most found work in their field and were usually employed in the health sector. Information from various graduate surveys shows that:

- Three out of four graduates found full-time work, and one out of 10 found part-time work. The unemployment rate for these graduates is significantly higher than for other graduates at this level.
- Two years after graduation, full-time earnings are significantly higher than the average for other graduates at this level but, between two and five years after graduation, increase at only half the average rate.
- Women account for approximately 74% of graduates, compared with 71% about 10 years ago.
- Given their highly specialized training, these graduates rarely face significant job competition from graduates in other fields.
- Not many graduates change jobs. Almost all the persons working as therapists or technicians two years after graduation are in the same jobs three years later. A few have entered teaching or administrative positions.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

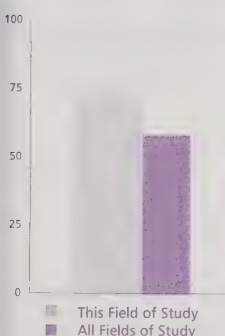
- Recent graduates from this field of study have had a higher than average and rising unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While new job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as teachers or in the life sciences field, than in medical laboratories or as dietitians or nutritionists. The occupations in which these graduates generally look for work are concentrated in the health, hospital and provincial administration industries which are expected to exhibit weak to average growth over the remainder of the decade.

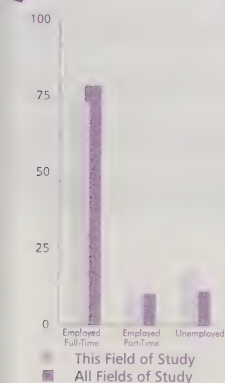
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



See also: This Field of Study Code: U53. Related Codes: M53, C53.  
Vol. 1 Occupations Cross-index: 313, 321, 322, 341.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?



# Medicine (MD)

Undergraduate University (4 or 5 years)

## Program of Study

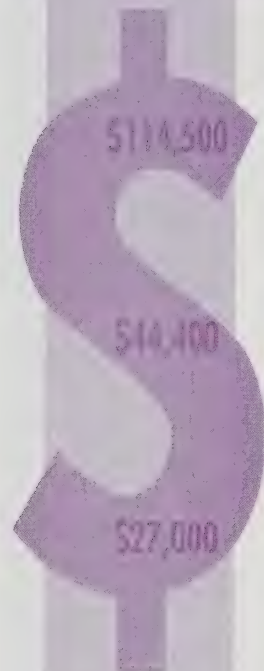
Students entering medicine can specialize in such fields as cardiology, general surgery, endocrinology, neurology, pediatrics and geriatrics.

- This program is offered at major universities in all provinces except Prince Edward Island and New Brunswick.

**Prerequisites:** Applicants must have completed secondary school with above-average marks in mathematics, chemistry, physics and biology. Quebec students must have a Diploma of Collegial Studies in health sciences. Most universities also require letters of recommendation and an interview. Applicants must pass the Medical College Admissions Test to be accepted into the program. Graduates with an M.D. degree cannot practise medicine until they are licensed by a provincial regulatory body. This process can take from one to five years, depending on the specialization chosen.

## Full-Time Earnings

1992

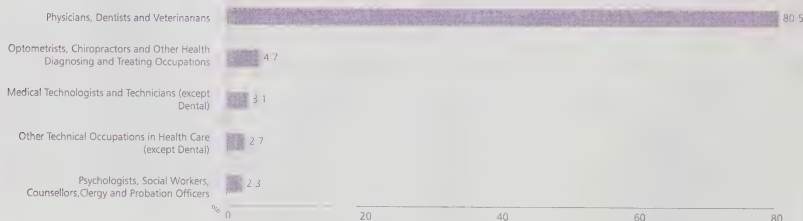


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

THIS FIELD OF STUDY

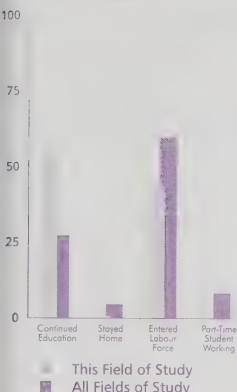
ALL FIELDS OF STUDY

Would they make the same educational choice again?	91%	71%
Are they satisfied with their work?	98%	91%
Does their work directly match their training?	83%	57%
Do they feel overqualified for their work?	11%	28%



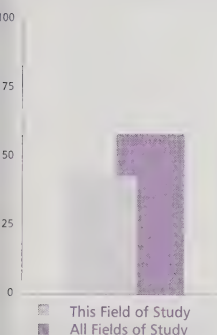
## Where Did They Go?

1992



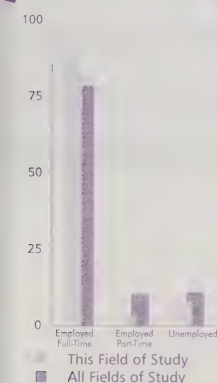
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,920 students graduated in medicine. Almost all graduates found full-time work in their field and are usually employed by hospitals or in private practice. Information from various graduate surveys shows that:

- Nine out of 10 graduates found employment, virtually all full-time. The unemployment rate for medicine graduates is slightly lower than for other graduates at this level.
- Two years after graduation, full-time earnings are much higher than the average for other graduates at this level; between two and five years after graduation, income growth is at more than one and a half times the average rate.
- Women account for approximately 43% of graduates, compared with 36% about 10 years ago.
- Given their special training, graduates from an M.D. program do not compete against graduates from other programs for jobs.
- Very few graduates change jobs. Almost all of those who are practising medicine two years after graduation are in the same field three years later.

## Work Prospects

The current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate but it is rising. Their relative earnings are declining but remain higher than the average earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average find jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen but remain good.

- Job openings are expected to be slightly less numerous than over the previous five-year period, and the number of people with the requisite skills for these jobs is expected to increase substantially. The competition among graduates will be intense.
- These graduates will experience more difficulty when searching for employment as physicians than previous graduates. The worsening labour market conditions for these graduates follow from the fact that there will be an oversupply of graduates even though they are concentrated in the private health practices and medical lab industries which are expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: U55. Related Codes: M51, M54. Vol. 1 Occupations Cross-index: 311.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?





# Nursing

Undergraduate University (4 or 5 years)

## Program of Study

Students entering this program study public health, community health nursing, intensive care nursing, obstetrical nursing, orthopedic nursing and psychiatric nursing.

- All major universities in Canada offer this program.
- Several universities offer accelerated programs for registered nurses who have graduated from a community college or cegep.

**Prerequisites:** In general, applicants must have completed secondary school with high marks in mathematics, chemistry, physics and English (French). Quebec students must have a Diploma of Collegial Studies. Applicants must also be interviewed, undergo a medical examination and provide letters of recommendation.

## Full-Time Earnings

1992

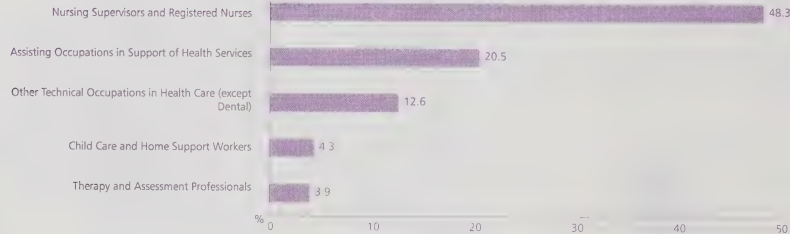


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



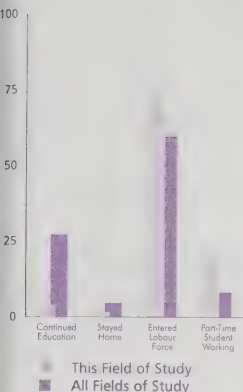
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	73%	71%
Are they satisfied with their work?	98%	91%
Does their work directly match their training?	85%	57%
Do they feel overqualified for their work?	52%	28%

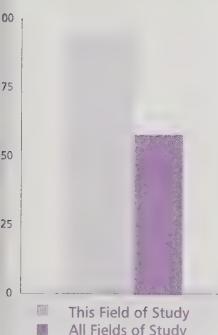
## Where Did They Go?

1992



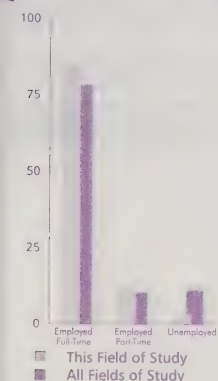
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 3,040 students graduated in nursing. The majority found positions as nurses and are usually employed by hospitals. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time work and nearly all other graduates found part-time work. The unemployment rate for nursing graduates is very low.
- Two years after graduation, full-time earnings are significantly higher than the average for other graduates at this level; but, between two and five years after graduation, income growth is twice as slow.
- Women account for approximately 95% of graduates, compared with 97% about 10 years ago.
- These graduates often find work in the same occupations as master's, community college and trade-vocational graduates with a certification in nursing.
- Few nursing graduates change jobs. The majority who are employed as nurses two years after graduation are in the same field three years later, although some have moved on to positions in administration or teaching.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their relative earnings are rising and are higher than the average earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as registered nurses and therapy and assessment professionals than as nurse aides or assistants in the health occupations. These occupations are concentrated in the health and hospital industries, which are expected to exhibit below average growth over the remainder of the decade.

**See also:** This Field of Study Code: U56, Related Codes: M56, C56, C57, T54. Vol. 1 Occupations Cross-index: 314, 315, 323, 341, 413.

## Work Prospects

1995 to 2000





# Pharmacy

## Undergraduate University (4 or 5 years)

### Program of Study

Students receive training in various branches of this discipline, such as retail, community, hospital and industrial pharmacy.

- Pharmacy programs are offered at universities in most provinces except Prince Edward Island, Newfoundland and New Brunswick.

**Prerequisites:** Applicants must have a secondary school diploma (Diploma of Collegial Studies in Quebec) and have completed one year of university with high marks in science. They must also provide a letter of recommendation, be interviewed and pass an entrance exam.

### Full-Time Earnings

1992

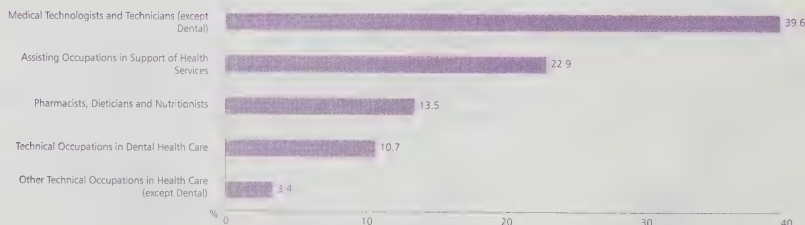


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

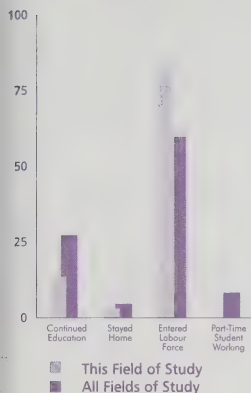
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	87%	71%
Are they satisfied with their work?	98%	91%
Does their work directly match their training?	95%	57%
Do they feel overqualified for their work?	2%	28%



## Where Did They Go?

1992



## After Graduation

In 1994, there were 830 pharmacy graduates. Two years after graduation, most were working in medical labs as pharmacy assistants or pharmacists. Information from various graduate surveys shows that:

- More than nine out of 10 graduates found full-time work, and more than one out of 20 found part-time work. The unemployment rate for pharmacy graduates is very low.
- Two years after graduation, full-time earnings are considerably higher than the average for other graduates at this level and, between two and five years after graduation, increase at about the average rate.
- Women account for approximately 65% of graduates, the same percentage as about 10 years ago.
- Given their highly specialized training, pharmacy graduates do not face significant job competition from graduates in other fields.
- Few pharmacy graduates change jobs; most are employed as pharmacists two years after graduation and are in the same field three years later, although some have become administrators or chemists. A smaller number of graduates are employed in administrative positions two years after graduation. By the fifth year of their career, several have taken jobs as pharmacists.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their relative earnings are rising and are higher than the average earnings of other graduates at the same level of studies. A significant proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more difficulty when searching for employment in medical laboratories than in the retail or industrial sectors which are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: U57.  
Vol. 1 Occupations Cross-index: 062, 221, 313, 321, 323.

## Work Prospects

1995 to 2000

Getting Better

Stable

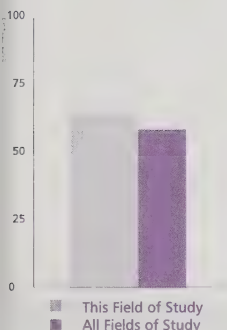
Getting Worse

for Graduates

How will labour market conditions change for these graduates?

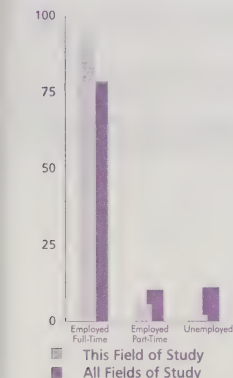
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Rehabilitation Medicine

Undergraduate University (3 or 4 years)

## Program of Study

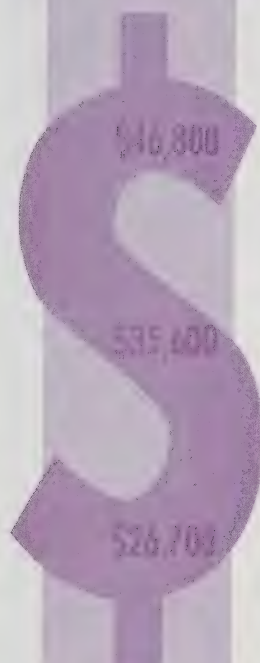
Rehabilitation medicine includes such branches as occupational therapy and physiotherapy.

- This program is offered at universities in most provinces except Prince Edward Island, Newfoundland, New Brunswick, Saskatchewan and Alberta.

**Prerequisites:** Applicants must have a high school diploma (Diploma of Collegial Studies in Quebec) and have completed one year of university with high marks in science. Universities also require applicants to provide a letter of recommendation, be interviewed and undergo a medical examination.

## Full-Time Earnings

1992

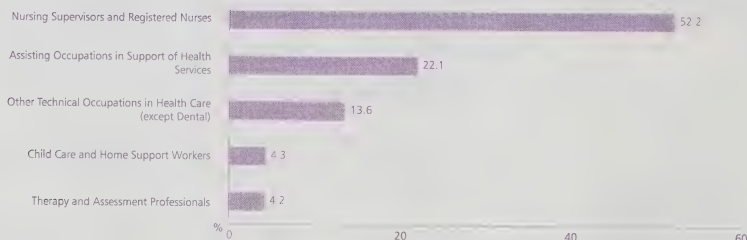


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



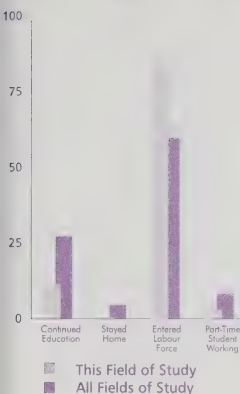
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	91%	71%
Are they satisfied with their work?	100%	91%
Does their work directly match their training?	97%	57%
Do they feel overqualified for their work?	5%	28%

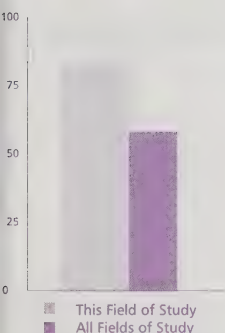
## Where Did They Go?

1992



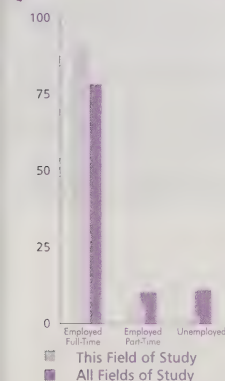
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,240 students graduated in rehabilitation medicine. Most found work in the health sector as nurses, occupational therapists or physiotherapists. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time work, and one out of 20 found part-time work; the unemployment rate for graduates is very low.
- Two years after graduation, full-time earnings are somewhat higher than the average for other graduates at this level and, between two and five years after graduation, increase at about the average rate.
- Women account for approximately 84% of graduates, compared with 98% about 10 years ago.
- Given their highly specialized training, these graduates do not face significant job competition from graduates in other fields.
- Not many graduates change jobs. Most of those working as occupational therapists or physiotherapists two years after graduation are in the same field three years later, although some have moved into administration or teaching.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their relative earnings are rising and are higher than the average earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as therapy and assessment professionals than in other technical occupations in therapy and assessment or health assisting occupations. The labour market conditions for the former occupations follow from the fact that they are concentrated in the health and hospital industries which are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: U58  
Vol. 1 Occupations Cross-index: 314, 315, 323, 341, 647.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?



# Dental Hygienists/Assistants

Career Programs, Community College (2 years)

## Program of Study

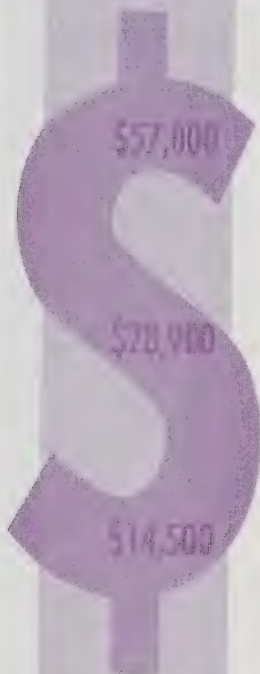
Students receive specialized training in denture therapy, dental hygiene, medical/dental technology and dental office assistance.

- This program is offered only in Quebec, Ontario and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French), mathematics, biology and chemistry. Most institutions require applicants to undergo an interview and a manual dexterity test, write a qualifying essay, pass a medical examination and hold a valid cardio-pulmonary resuscitation (CPR) certificate. Applicants for the dental hygiene qualification must first obtain a dental assistant certificate.

## Full-Time Earnings

1992

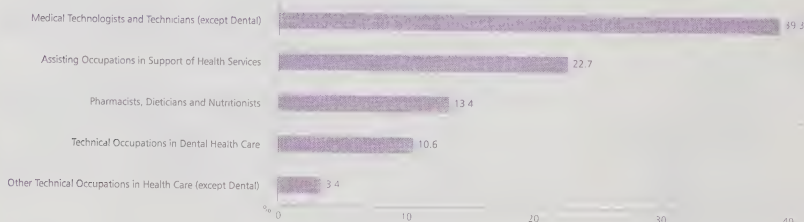


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

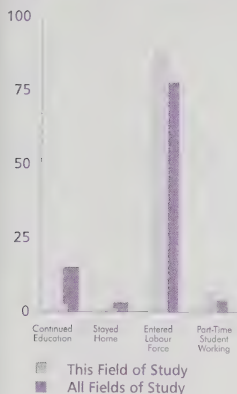
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	86%	74%
Are they satisfied with their work?	99%	93%
Does their work directly match their training?	77%	61%
Do they feel overqualified for their work?	32%	34%



## Where Did They Go?

1992



## After Graduation

In 1994, 630 students graduated in dental hygiene/assistant technologies. The majority found work in their field and are employed in dental offices. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment and the seventh found part-time employment; there is virtually no unemployment among graduates.
- Two years after graduation, full-time earnings are higher than the average for other community college graduates and, between two and five years after graduation, increase at one and a half times the average rate.
- Women account for approximately 96% of graduates, compared with 95% about 10 years ago.
- These graduates often enter the same occupations as graduates from a similar course at the trade-vocational level and at the undergraduate university level.
- Very few graduates change jobs. The majority of those working as hygienists two years after graduation are in the same jobs three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a below average and declining unemployment rate. Their earnings are higher than average but declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While new job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as dental technicians or hygienists. Graduates are generally employed in private practices or medical and dental health clinics which are expected to exhibit above average growth over the remainder of the decade.

See Also: This Field of Study Code: C51. Related Code: T51.  
Vol. 1 Occupations Cross-Index: 322, 341.

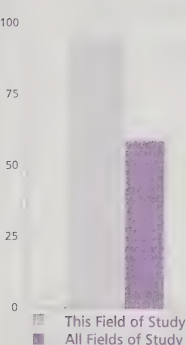
## Work Prospects

1995 to 2000



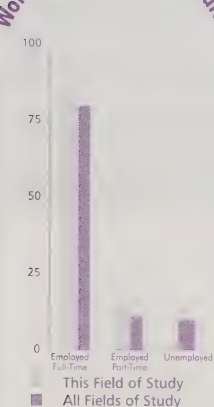
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Health Technologies - Other

Career Program, Community College (2 years)

## Program of Study

Students receive training in health care support (stretcher bearer, operating room technician), biological science (biological laboratory technician, biomedical engineering), public/environmental health (public health inspector) and health education.

- This program is offered at community colleges in every province except Newfoundland, Prince Edward Island and New Brunswick.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French), biology, chemistry, mathematics and physics. Applicants must also undergo an interview and medical examination.

## Full-Time Earnings

1992

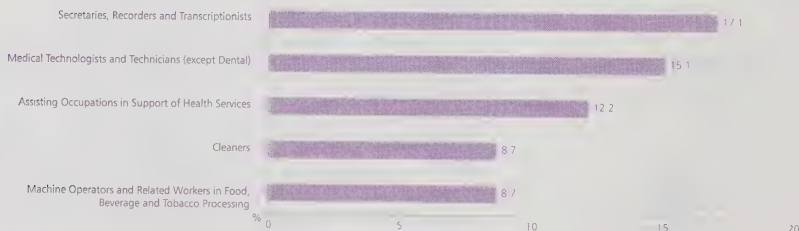


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



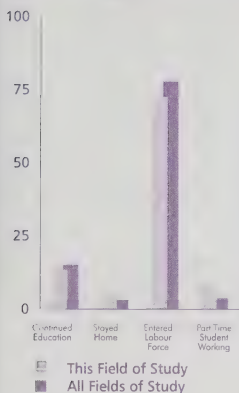
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	82%	74%
Are they satisfied with their work?	95%	93%
Does their work directly match their training?	47%	61%
Do they feel overqualified for their work?	44%	34%

## Where Did They Go?

1992



## After Graduation

In 1994, 500 students graduated from this type of program and found employment in a variety of occupations, such as health care technician, health care assistant or secretary. Most graduates are employed by hospitals. Information from various graduate surveys shows that:

- Two out of three graduates found full-time employment, and one out of five found part-time employment; the unemployment rate for these graduates is higher than the average for other community college graduates.
- Two years after graduation, full-time earnings are about the same as for other community college graduates but, between two and five years after graduation, increase at somewhat above the average rate.
- Women account for approximately 78% of graduates, compared with 80% about 10 years ago.
- These graduates often enter the same occupations as graduates from dental hygiene, medical laboratory technology, radiation technology and nuclear medicine, and other health and social service disciplines.
- Not many graduates change jobs. The majority of those employed in health care two years after graduation were in the same jobs three years later, although some became nurse aides. Those employed as nurse aides two years after graduation were in the same jobs three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an above average but falling unemployment rate. Their earnings are average but rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While new job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more success when searching for employment as medical technologists than as medical transcribers and recorders or nurse aides. These graduates generally work in private practices, hospitals or medical laboratories which are expected to exhibit above average growth over the remainder of the decade.

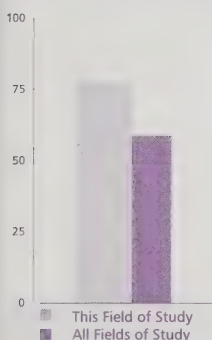
## Work Prospects

1995 to 2000



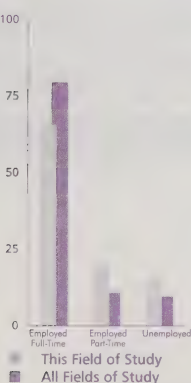
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



See also: This Field of Study Code: C53. Related Code: U53.  
Vol.1 Occupations Cross-index: 124, 315, 321, 341.



# Medical Laboratory Technologies

Career Program, Community College (2 years)

## Program of Study

Students receive training in the basics of clinical chemistry, clinical microbiology, haematology, histo-technology and immuno-haematology.

- This program is offered at community colleges in every province except Prince Edward Island.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French), biology, chemistry, mathematics and physics. In most cases, applicants must pass an interview, write a qualifying essay and undergo a medical examination.

## Full-Time Earnings

1992

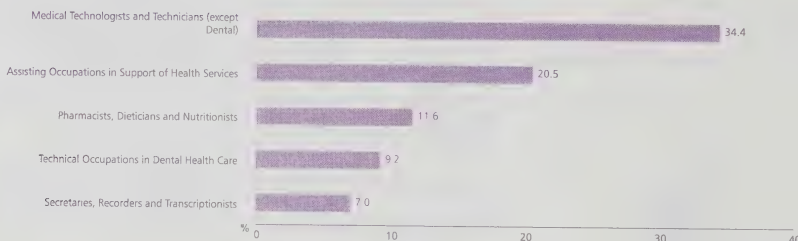


Of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	70%	74%
Are they satisfied with their work?	87%	93%
Does their work directly match their training?	81%	61%
Do they feel overqualified for their work?	35%	34%



## After Graduation

In 1994, 930 students graduated in medical laboratory technologies. Most found work in their field and are usually employed by hospitals. Information from various graduate surveys shows that:

- Seven out of 10 found full-time employment, and the three others found part-time employment. There is virtually no unemployment among these graduates.
- Two years after graduation, full-time earnings are slightly higher than the average for other community college graduates and, between two and five years after graduation, increase at about the average rate.
- Women account for approximately 79% of graduates, compared with 88% about 10 years ago.
- Given their highly specialized training, graduates do not often encounter competition for jobs from other graduates.
- Few graduates change jobs. Most of those working as laboratory technicians two years after graduation are in the same jobs three years later. Some become teachers or administrative officers or find other positions in health care.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a below average and falling unemployment rate. Their earnings are higher than average but declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

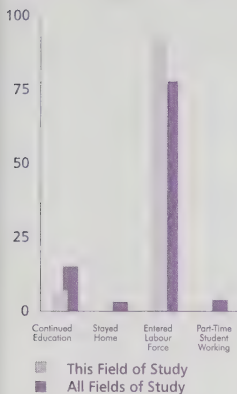
Over the next five years, the labour market situation for these graduates is expected to remain good.

- While new job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as medical laboratory technologists. Most graduates are employed in hospitals, medical laboratories and retail trade, with private sector health care services as a new area of employment growth.

See also: This Field of Study Code: C55.  
Vol. 1 Occupations Cross-index: 313, 321, 322, 323, 341.

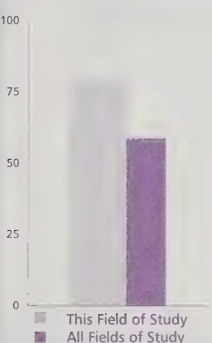
### Where Did They Go?

1992



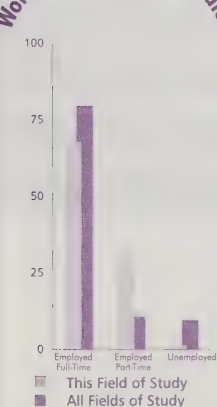
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000







# Nursing - Diploma

Career Program, Community College (2 years)

## Program of Study

This program leads to qualification as a registered nurse or to a diploma in nursing technology.

- Nursing programs are offered at community colleges in every province.
- Students must complete a work placement in order to graduate.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French), biology, chemistry and mathematics. Many institutions require applicants to pass an examination, provide letters of recommendation, have a first aid certificate and undergo a medical examination.

## Full-Time Earnings

1992

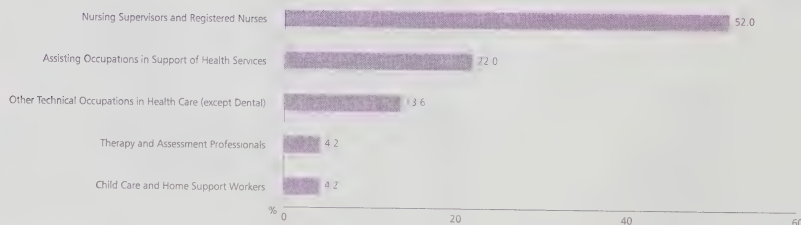


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

THIS FIELD OF STUDY ALL FIELDS OF STUDY

Would they make the same educational choice again?	74%	74%
Are they satisfied with their work?	95%	93%
Does their work directly match their training?	95%	61%
Do they feel overqualified for their work?	9%	34%

## After Graduation

In 1994, 8,150 students graduated in nursing. Almost all found work in their field. These graduates are usually employed by hospitals. Information from various graduate surveys shows that:

- Three out of four graduates found full-time employment, and one out of four found part-time employment; the unemployment rate for these graduates is very low.
- Two years after graduation, full-time earnings are significantly higher than the average for other community college graduates but, between two and five years after graduation, increase at half the average rate.
- Women account for approximately 90% of graduates, compared with 96% about 10 years ago.
- These graduates enter the same occupations as other nursing graduates at the community college and university levels.
- Very few nursing graduates change jobs. Most of those employed as nurses two years after graduation were in the same jobs three years later. Some became teachers, managers or administrators.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their earnings are higher than average but declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

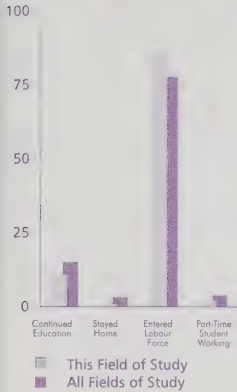
Over the next five years, the labour market situation for these graduates is expected to remain good.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as nurse aides or assistants in support of health services. The stable labour market situation follows from the fact that these graduates generally work in the hospital sector of the economy which is expected to exhibit below average employment growth over the remainder of the decade.

**See also:** This Field of Study Code: C56. Related Codes: U56, C57, T54.  
Vol. 1 Occupations Cross-index: 314, 315, 323, 341, 647.

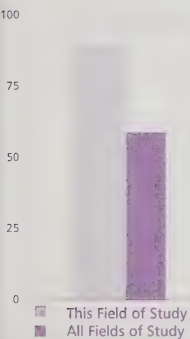
### Where Did They Go?

1992



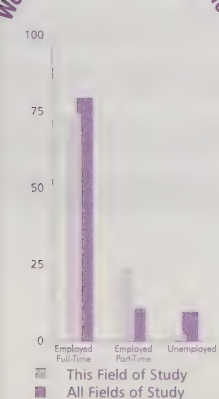
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000





# Nursing - Other

Career Program, Community College (2 years)

## Program of Study

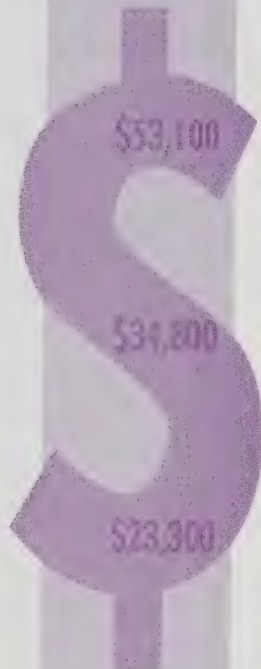
Students receive training as nurse aides or nursing attendants, registered nursing assistants, and psychiatric and mental health nurses. Dental and other specialized nursing fields are also taught.

- This program is offered at community colleges everywhere except in the Atlantic provinces.

**Prerequisites:** Admission criteria vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French), biology, chemistry and mathematics. Institutions usually require applicants to undergo English (French) and mathematics tests and an interview, provide letters of recommendation and have a first aid certificate.

## Full-Time Earnings

1992

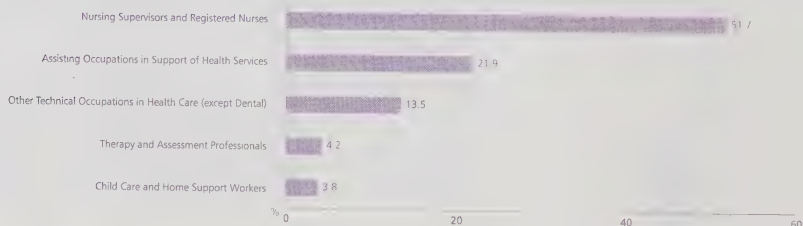


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

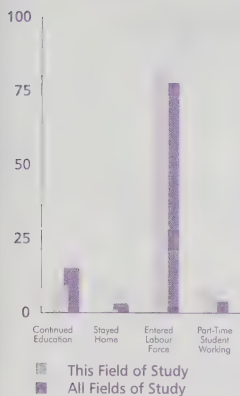
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	80%	74%
Are they satisfied with their work?	95%	93%
Does their work directly match their training?	92%	61%
Do they feel overqualified for their work?	10%	34%



## Where Did They Go?

1992



## After Graduation

In 1994, 310 students graduated from this type of program. The majority work as nurses and are usually employed by hospitals. Information from various graduate surveys shows that:

- More than three out of four graduates found full-time employment, and one out of five found part-time employment; the unemployment rate for graduates is much lower than the average for this level of study.
- Two years after graduation, full-time earnings are much higher than the average for other community college graduates but, between two and five years after graduation, increase at half the average rate.
- Women account for approximately 78% of graduates, compared with 95% about 10 years ago.
- These graduates often enter the same occupations as other nursing graduates at the community college and university levels.
- Very few graduates change jobs. The majority of those working as nurses two years after graduation are in the same positions three years later. Very few of them are employed as managers or administrators five years after graduation.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

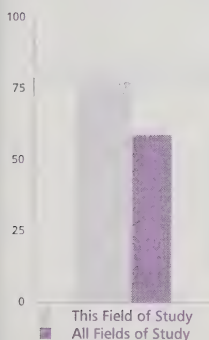
- Recent graduates from this field of study have had a much lower than average unemployment rate. Their earnings are higher than average and rising relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While new job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as nurse aides or assistants in support of health services. These graduates generally work in the hospital sector of the economy which is expected to exhibit below average employment growth over the remainder of the decade.

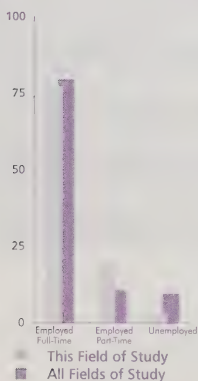
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



**See also:** This Field of Study Code: C57. Related Codes: U56, C56, T54. Vol. 1 Occupations Cross-index: 314, 315, 323, 341, 647.

## Work Prospects

1995 to 2000







# Radiography/Radiation Therapy/ Nuclear Medicine Technologies

Career Program, Community College (2 years)

## Program of Study

Students receive training in medical radiation technologies such as radiography (x-ray technology), nuclear medicine technology and radiation therapy technology.

- This program includes theoretical and clinical training.
- Radiography and nuclear medicine technologies are offered at community colleges in every province, and radiation therapy is taught in hospitals.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French), biology, chemistry, mathematics and physics. Applicants are also required to pass an interview and provide a letter of recommendation.

## Full-Time Earnings

1992

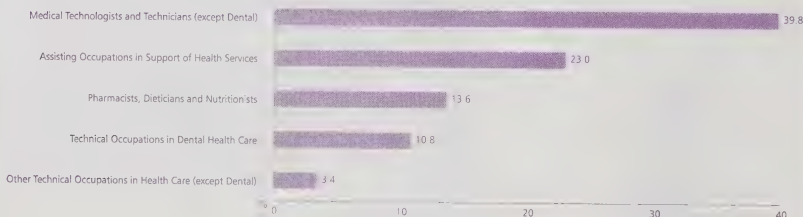


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



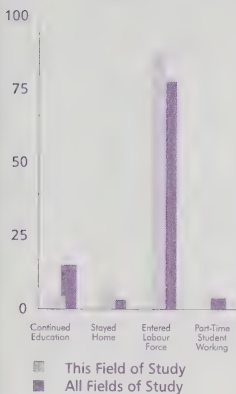
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	82%	74%
Are they satisfied with their work?	97%	93%
Does their work directly match their training?	94%	61%
Do they feel overqualified for their work?	26%	34%

## Where Did They Go?

1992



## After Graduation

In 1994, 680 students graduated in radiation therapy and nuclear medicine technologies. The majority found work in their field and are usually employed by hospitals. Information from various graduate surveys shows that:

- Nearly nine out of 10 graduates found full-time employment and the tenth graduate found part-time employment; there is virtually no unemployment among graduates, the lowest rate for all health graduates.
- Two years after graduation, full-time earnings are significantly higher than the average for other community college graduates but, between two and five years after graduation, increase at only half the average rate.
- Women account for approximately 78% of graduates, compared with 86% about 10 years ago.
- Given their highly specialized training, graduates do not often face job competition from graduates in other fields.
- Few graduates change jobs. The majority of those working as radiologists two years after graduation are in the same positions three years later. A few become teachers or enter administrative occupations.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

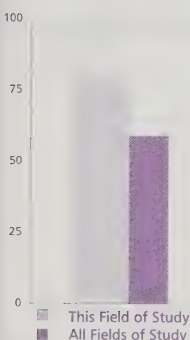
- Recent graduates from this field of study have had a below average and falling unemployment rate. Their earnings are higher than average and rising relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While new job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as medical radiation technologists or technicians than in other health related occupations. Most graduates are employed in hospitals and medical laboratories with private sector health care services as a new area of employment growth.

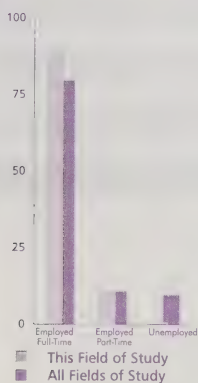
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



See also: This Field of Study Code: C58.  
Vol. 1 Occupations Cross-index: 321, 322, 323, 341.

## Work Prospects

1995 to 2000





# Dental Hygiene/Assistant Technologies

Trade/Vocational College (7 months)

## Program of Study

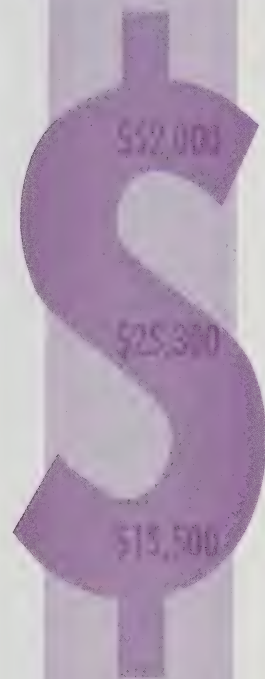
Students receive training in dental hygiene, dental office assistance and denture therapy.

- This program is offered in every province except Newfoundland and New Brunswick.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for information.

## Full-Time Earnings

1992

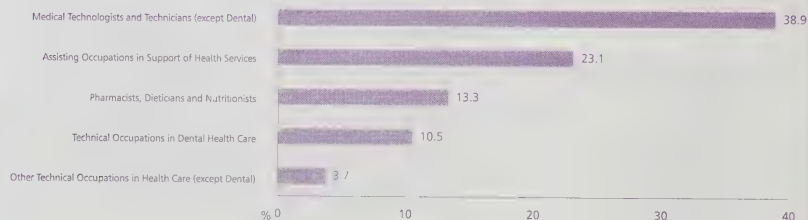


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

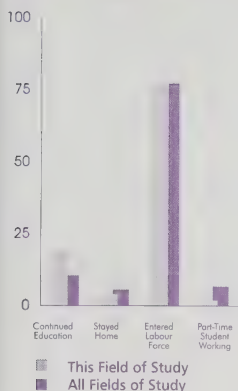
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	83%	74%
Are they satisfied with their work?	93%	92%
Does their work directly match their training?	90%	47%
Do they feel overqualified for their work?	16%	36%



## Where Did They Go?

1992



## After Graduation

In 1994, 110 students received a diploma in dental hygiene from a trade/vocational college. Almost all graduates found employment in dental health care. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate is well below the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are slightly above the average for other trade/vocational graduates but increase at half the average rate over the next three years.
- Women account for 99% of graduates, almost the same rate as about 10 years ago.
- These graduates often find work in the same occupations as graduates from this and related dental health fields at the community college level.
- Few graduates change jobs. The majority of those employed as dental hygienists two years after graduation are in the same field three years later, although some have found jobs as receptionists. Some of the graduates employed as receptionists become dental hygienists three to five years after graduation.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had an unemployment rate that is half the average. Their earnings are average and rising relative to the earnings of other graduates at the same level of studies. A dramatically higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as dental hygienists and therapists than as dental assistants or bench workers. The labour market conditions for the former occupations follow from the fact that they are concentrated in dental offices and hospitals which are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: T51. Related Code: C51.  
Vol. 1 Occupations Cross-index: 312, 321, 322, 341.

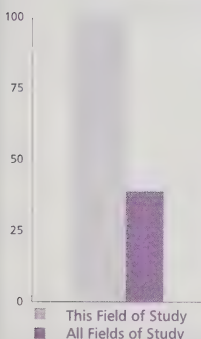
## Work Prospects

1995 to 2000



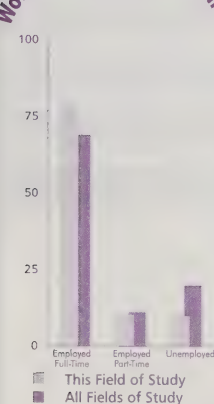
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Nursing Aide/Orderly

Trade/Vocational College (6 months)

## Program of Study

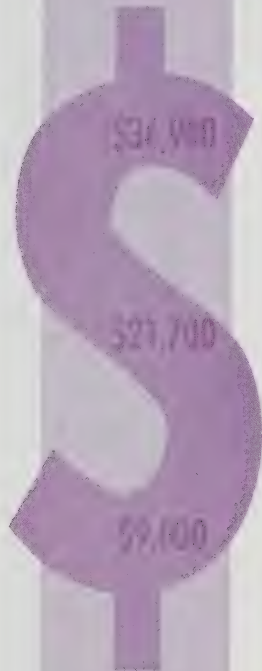
Students receive training as nursing aides, orderlies and nursing attendants and nursing assistants in hospitals and clinics.

- This program is offered in every province except Quebec, where training is available at the secondary school level.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

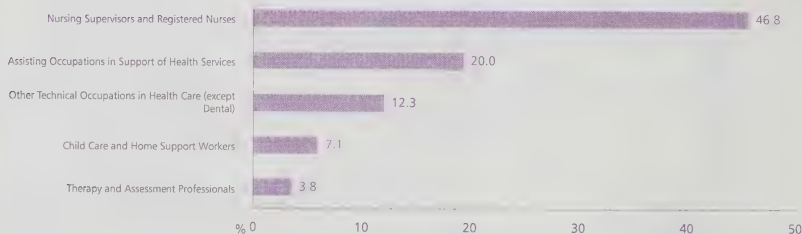


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



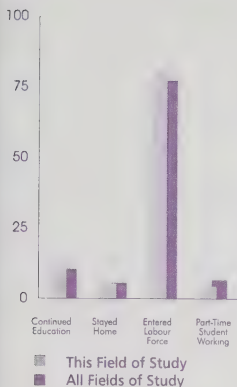
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	80%	74%
Are they satisfied with their work?	97%	92%
Does their work directly match their training?	68%	47%
Do they feel overqualified for their work?	22%	36%

## Where Did They Go?

1992



## After Graduation

In 1994, 2,200 students received a diploma as a nursing aide or orderly from a trade/vocational college. Almost all graduates are employed in health care, usually by a hospital or other health care institution. Information from various graduate surveys shows that:

- Less than three out of five graduates found full-time employment, and nearly two out of five found part-time employment; the unemployment rate for these graduates is far below the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are below the average for other trade/vocational graduates and increase at about the average rate for the next two years.
- Women account for approximately 88% of graduates, compared with 86% about 10 years ago.
- These graduates often enter the same occupations as graduates from social services or other branches of health care.
- Very few graduates change jobs. Almost all those employed as nursing assistants two years after graduation are in the same field three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are stable but low relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be about average.
- These graduates will have more success when searching for employment as nursing aides and orderlies than as child care and home support workers. These occupations are concentrated in the hospital and other health and social services industries, which are expected to exhibit slow to average growth over the remainder of the decade.

See also: This Field of Study Code: T53. Related Code: C57.  
Vol. 1 Occupations Cross-index: 315, 323, 341, 647.

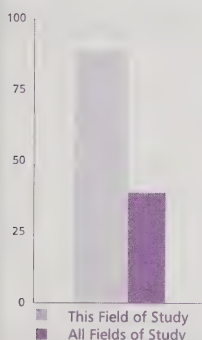
## Work Prospects

1995 to 2000



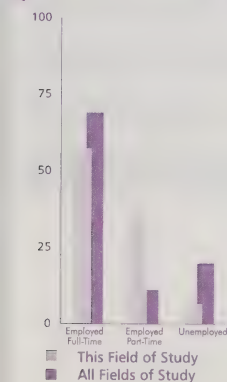
## Percentage of Women

1994



## Work Life of Recent Graduates

1992





# Nursing - Other

Trade/Vocational College (4 months)

## Program of Study

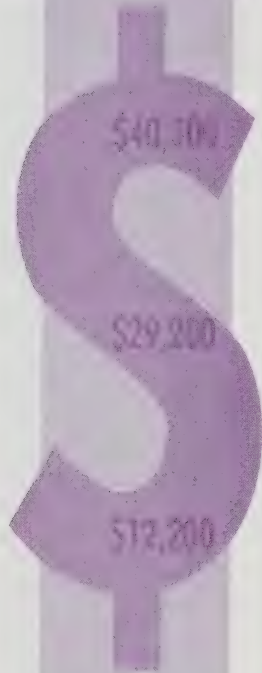
Students receive training in psychiatric nursing, mental health nursing, public health nursing and dental nursing.

- This program is offered in every province except Quebec, Saskatchewan and British Columbia.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a college diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

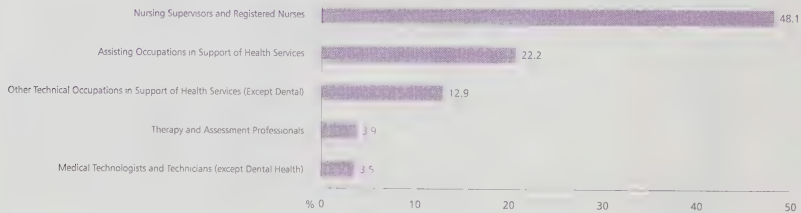


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



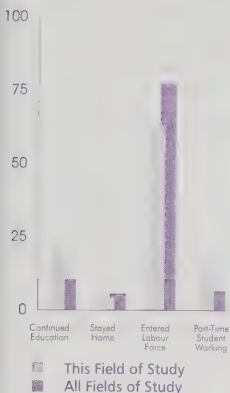
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	86%	74%
Are they satisfied with their work?	100%	92%
Does their work directly match their training?	62%	47%
Do they feel overqualified for their work?	18%	36%

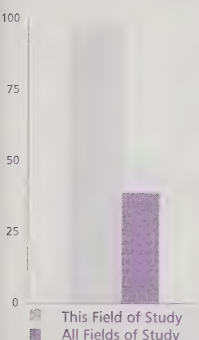
## Where Did They Go?

1992



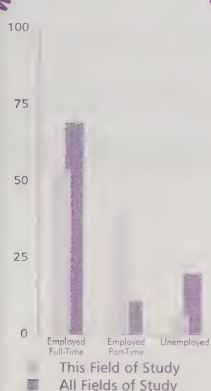
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 260 students received a diploma in this field from a trade/vocational college. A large majority are employed in health care. Most are employed by hospitals, but some work in other health care establishments or in doctors' offices. Information from various graduate surveys shows that:

- More than half the graduates found full-time employment, and nearly two out of five found part-time employment; the unemployment rate for these graduates is well below the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are above the average for other trade/vocational graduates, but increase at a slightly lower than average rate over the next three years.
- Women account for approximately 97% of graduates, compared with 98% about 10 years ago.
- These graduates often enter the same occupations as nursing, rehabilitation medicine and social service graduates.
- Very few graduates change jobs. Almost all of those employed in these occupations two years after graduation are in the same occupation three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be about average.
- These graduates will have more success when searching for employment as nurse aides and orderlies and midwives than as nurses. The labour market conditions for the former occupations follow from the fact that they are concentrated in the hospital and other health and social services industries which are expected to exhibit slow to average growth over the remainder of the decade.

See also: This Field of Study Code: T54. Related Code: C57.  
Vol. 1 Occupations Cross-index: 315, 323, 341.

## Work Prospects

1995 to 2000







# Biology

Master's University (1 or 2 years)

## Program of Study

This program includes the study of microbiology, genetics, cell biology, animal physiology, botany and ecology.

- Biology is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in biology or the equivalent. An interview and letters of recommendation are also required.

## Full-Time Earnings

1992

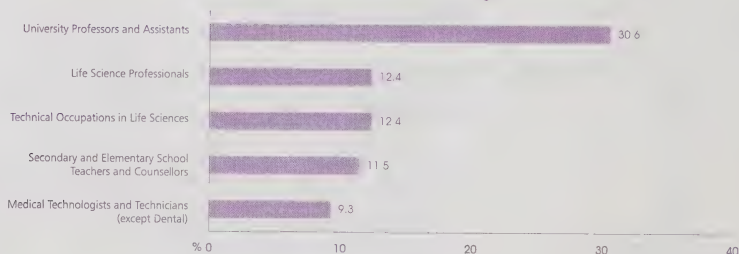


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

THIS FIELD OF STUDY

ALL FIELDS OF STUDY

Would they make the same educational choice again?

71%

83%

Are they satisfied with their work?

95%

95%

Does their work directly match their training?

70%

69%

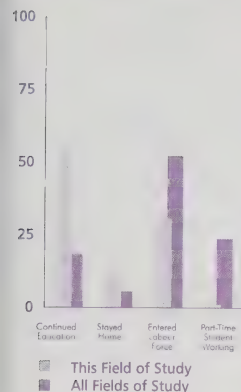
Do they feel overqualified for their work?

57%

57%

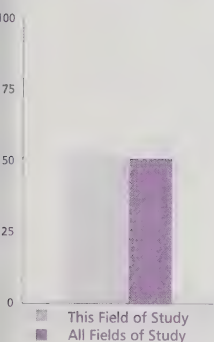
## Where Did They Go?

1992



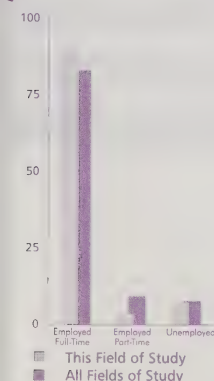
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 360 students received a master's degree in biology and many found work as biologists and teachers. Graduates are usually employed in the field of education. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time employment, and very few found part-time employment; the unemployment rate for these graduates is about the same as for other master's graduates.
- Two years after graduation, full-time earnings are far below the average for other master's graduates but increase at twice the average rate over the next three years.
- Women account for approximately half the graduates, compared with 37% about 10 years ago.
- These graduates often find work in the same occupations as other university graduates in animal and plant sciences and agriculture, and community college graduates with diplomas in forestry and environmental or conservation technologies.
- A relatively significant number of graduates change jobs. Many of those employed as biologists two years after graduation changed jobs three years later. Some went into teaching. Many graduates employed as teachers also changed jobs three to five years after graduation.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a below average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen yet remain fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to rise substantially. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and university professors and assistants than as biologists, biological technologists and medical laboratory workers. The poor labour market conditions for the former group of occupations follow from the fact that they are concentrated in the education and health industries which are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: M64. Related Code: U64.  
Vol. 1 Occupations Cross-index: 212, 222, 412, 414.

## Work Prospects

1995 to 2000





# Agriculture - Other

## Undergraduate University (3 years)

### Program of Study

Students enrolled in this program study the sciences of agronomy, dairy, food and soil.

- This program is offered at universities in most provinces except Prince Edward Island, Newfoundland and New Brunswick.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics, chemistry, physics and biology. Quebec students must have a Diploma of Collegial Studies.

### Full-Time Earnings

1992

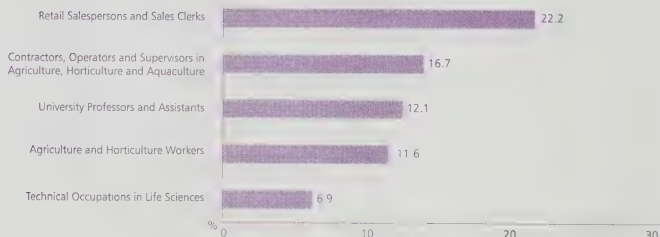


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

### Occupations of Graduates

1992



### Graduates Speak Out

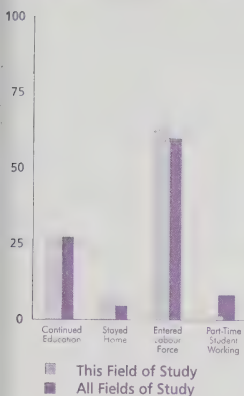
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	64%	71%
Are they satisfied with their work?	92%	91%
Does their work directly match their training?	53%	57%
Do they feel overqualified for their work?	36%	28%



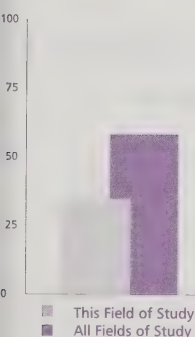
## Where Did They Go?

1992



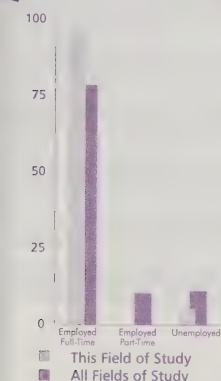
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 260 students graduated from other agriculture programs. They found work in a variety of fields, such as sales, farming and agronomy. Most are employed in agriculture. Information from various graduate surveys shows that:

- Almost all graduates found full-time work. The unemployment rate for these graduates is very low.
- Two years after graduation, full-time earnings are somewhat lower than the average for other graduates at this level; but, between two and five years after graduation, income growth is above average.
- Women account for approximately 35% of graduates, compared with 27% about 10 years ago.
- These graduates often work in the same occupations as master's and community college graduates with certification in agriculture and related disciplines.
- There is a high degree of job changing among these graduates; many graduates working in agronomy change jobs between the third and fifth years of their careers. Some enter management. Five years after graduation, the majority of people working in sales have also changed jobs; some enter management and others find office work. Graduates who go into farming are less likely to change jobs.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their relative earnings are rising but are lower than the average earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as agriculture and horticulture workers. They will have less difficulty when searching for employment as contractors in agriculture, horticulture and aquaculture, and as agricultural consultants and specialists. These occupations are concentrated in the agriculture sector which is expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: U61. Related Codes: U63, C61. Vol. 1 Occupations Cross-index: 212, 222, 412, 825, 843.

## Work Prospects

1995 to 2000







# Animal and Plant Sciences

Undergraduate University (4 years)

## Program of Study

Students enrolled in this program specialize in poultry science, poultry genetics, plant protection, plant physiology and horticulture.

- This program is offered at universities in every province except Newfoundland, Prince Edward Island and New Brunswick.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Admission requirements vary depending on the university. In general, applicants must have a high school diploma with good marks in mathematics, biology, chemistry and physics. Quebec applicants must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992

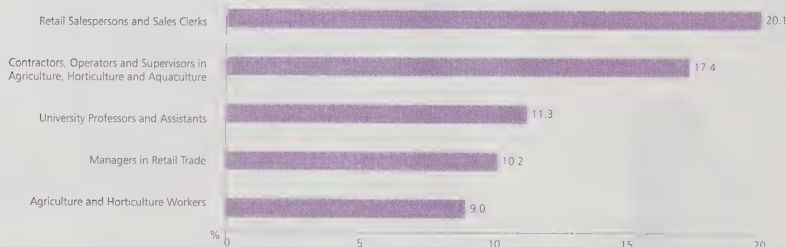


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



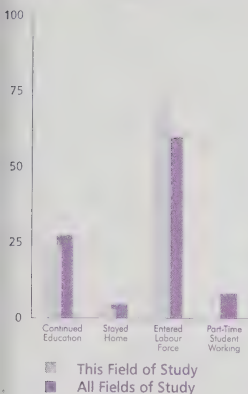
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	75%	71%
Are they satisfied with their work?	90%	91%
Does their work directly match their training?	55%	57%
Do they feel overqualified for their work?	39%	28%

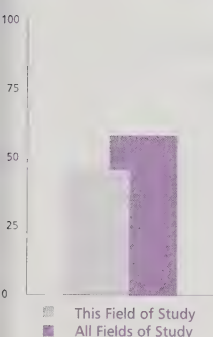
## Where Did They Go?

1992



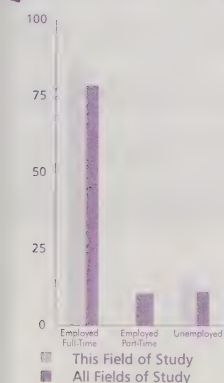
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 330 students received an undergraduate degree in animal and plant sciences. Some are employed in sales and others work in agronomy or teach at the postsecondary level. However, most graduates are employed in agriculture. Information from various graduate surveys shows that:

- Six out of seven graduates found employment, virtually all full-time; the unemployment rate for these graduates is somewhat higher than for other graduates at this level.
- Two years after graduation, full-time earnings are somewhat below the average for other graduates at this level, but increase at almost twice the average rate for the next three years.
- Women account for approximately 46% of graduates, compared with 40% about 10 years ago.
- These graduates usually find work in the same occupations as master's and community college graduates with certification in agriculture and related disciplines.
- A large number of graduates change jobs. The majority of those employed in agronomy two years after graduation have changed jobs three years later. Some have become administrators whereas others are employed in a variety of areas.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average but declining unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While new job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as teachers than as agriculture, horticulture or aquaculture workers, agriculture representatives, consultants and specialists or in the technical life sciences field. The occupations in which these graduates generally look for work are concentrated in the education, agriculture and provincial administration industries, which are expected to exhibit weak growth over the remainder of the decade.

**See also:** This Field of Study Code: U63. Related Codes: U61, C61.  
Vol. 1 Occupations Cross-index: 212, 222, 412, 825, 843.

## Work Prospects

1995 to 2000





# Biology

Undergraduate University (3 years)

## Program of Study

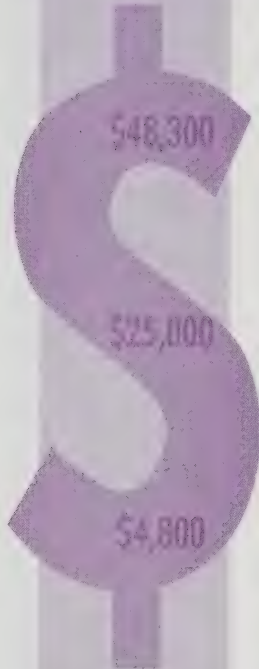
People entering this field receive training in microbiology, cell biology, botany, animal biology, marine biology, genetics, ecology and evolution.

- Biology programs are offered at universities in most provinces except Prince Edward Island and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics, chemistry, physics and biology. Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992

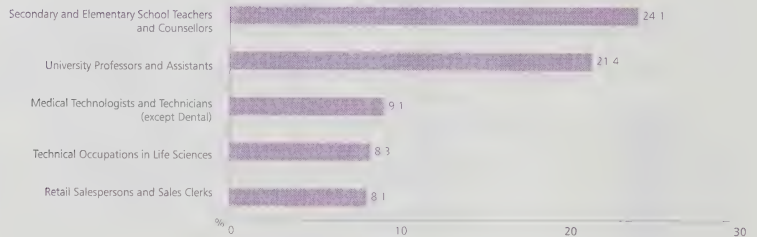


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,000 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

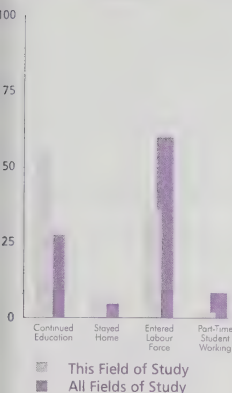
THIS FIELD OF STUDY ALL FIELDS OF STUDY

Would they make the same educational choice again?	64%	71%
Are they satisfied with their work?	90%	91%
Does their work directly match their training?	44%	57%
Do they feel overqualified for their work?	35%	28%



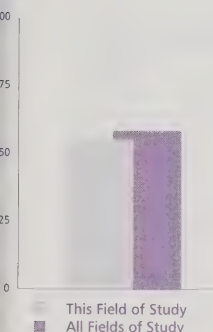
## Where Did They Go?

1992



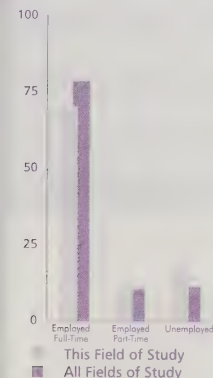
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 4,530 students graduated in biology. They found work in a wide variety of fields, including biology and teaching. Biology graduates usually find employment in the educational system. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and one out of 10 found part-time employment. The unemployment rate for biology graduates is much higher than for other graduates at this level.
- Two years after graduation, full-time earnings are well below the average for other graduates at this level; but, between two and five years after graduation, earnings increase at twice the average rate.
- Women account for approximately 55% of graduates, compared with 48% about 10 years ago.
- Biology graduates often find work in the same occupations as master's and community college graduates with certification in biology or agriculture related disciplines.
- Few graduates who enter teaching change jobs; the opposite is true for most of the other graduates, who work in a wide variety of fields. Five years after graduation, the majority of those working as salespersons have changed jobs, usually to enter management or administrative positions.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a much higher than average unemployment rate. Their relative earnings are rising but low when compared to the average earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and remain poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to rise substantially. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers, university professors and assistants than as life science professionals or technologists and medical technologists. The labour market conditions for the former occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: U64. Related Codes: M64, U63. Vol. 1 Occupations Cross-index: 212, 222, 321, 412, 414.

## Work Prospects

1995 to 2000







# Food and Household Sciences

Undergraduate University (4 years)

## Program of Study

People studying food and household sciences learn the principles of nutrition, food science, household science, and consumer and family studies.

- This program is offered at universities in most provinces except Prince Edward Island and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics, chemistry, physics and biology. Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992

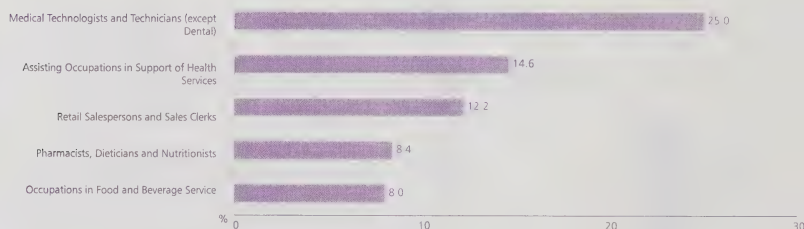


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



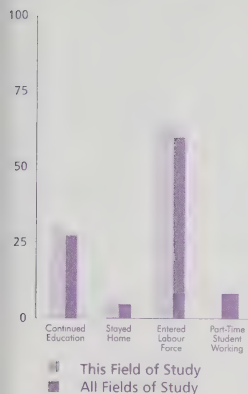
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	49%	71%
Are they satisfied with their work?	86%	91%
Does their work directly match their training?	53%	57%
Do they feel overqualified for their work?	37%	28%

## Where Did They Go?

1992



## After Graduation

In 1994, 1,180 students received an undergraduate degree in food and household sciences. Many found work in health care. Some entered food services, but most found jobs in the hospital sector. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 10 found part-time employment. The unemployment rate is very close to that for other graduates at this level.
- Two years after graduation, full-time earnings are well below the average for other graduates at this level; but, between two and five years after graduation, earnings increase at a slightly faster pace.
- Women account for approximately 93% of graduates, compared with 97% about 10 years ago.
- In most cases, graduates employed in hospitals are highly specialized and find work in similar occupations to graduates from cooking or food preparation technologies fields of study at the community college or trade vocational levels.
- A large number of graduates change jobs; the exception may be for those in food services, some of whom find administrative positions by the fifth year of their careers. The majority of other graduates, who work in a variety of areas, have changed jobs by the fifth year of their careers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their relative earnings are rising but are low compared to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve but remain fair.

- The increase in job openings is expected to exceed the number of people with the requisite skills for these jobs. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as teachers or in health service occupations than as dietitians, nutritionists, chefs, cooks and retail salespersons. The labour market conditions for the latter occupations follow from the fact that they are concentrated in the retail trade and the accommodation and food industries which are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: U65.  
Vol. 1 Occupations Cross-index: 313, 321, 341, 624, 645.

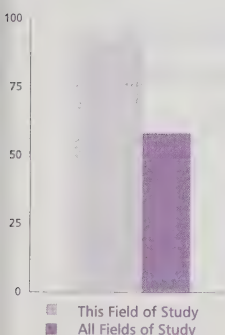
## Work Prospects

1995 to 2000



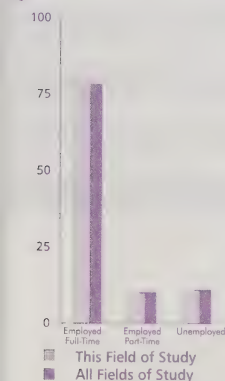
## Percentage of Women

1994



## Work Life of Recent Graduates

1992





# Forestry

Undergraduate University (4 years)

## Program of Study

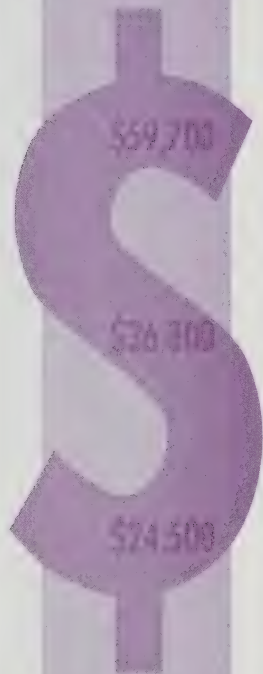
This program includes the study of ecology, harvesting, resource management, wildlife, wood science and forestry economics.

- Forestry is offered at universities in New Brunswick, Quebec, Ontario, Alberta and British Columbia.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics, chemistry, physics and biology. Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992

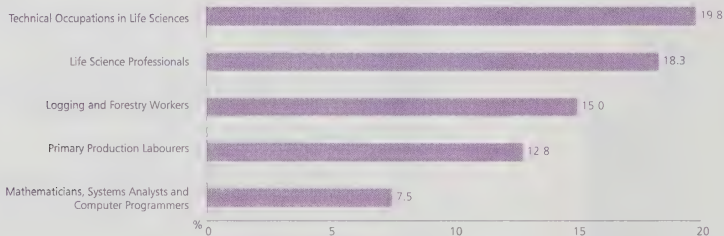


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

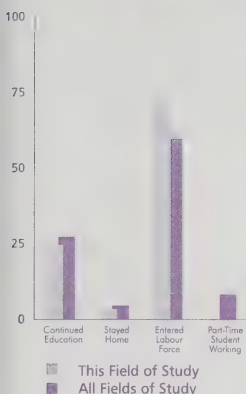
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	72%	71%
Are they satisfied with their work?	100%	91%
Does their work directly match their training?	64%	57%
Do they feel overqualified for their work?	37%	28%



## Where Did They Go?

1992



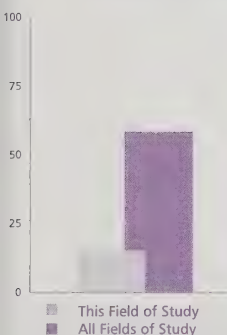
## After Graduation

In 1994, 270 students graduated in forestry. The majority found work in their field, many as forestry engineers or in jobs related to forest development. These graduates are most often employed in the forestry sector. Information from various graduate surveys shows that:

- 19 out of 20 graduates found full-time work. The unemployment rate among forestry graduates is very low.
- Two years after graduation, full-time earnings are significantly higher than the average for other graduates at this level and, between two and five years after graduation, increase at an above average rate.
- Women account for approximately 15% of graduates, compared with 19% about 10 years ago.
- Graduates often find work in the same occupations as graduates from biology or other forestry related disciplines at this or other levels of study.
- A significant number of forestry graduates change jobs; over half of those working as forestry engineers two years after graduation have changed jobs three years later, often to become administrators, analysts or statisticians. The same is true for graduates employed in other forestry-related positions: many are working as forestry engineers five years after graduation.

## Percentage of Women

1994



## Work Prospects

The current labour market situation in the occupations in which these graduates usually look for work is fair.

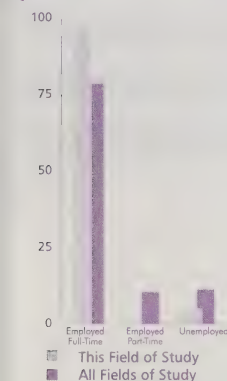
- Recent graduates from this field of study have had a lower than average unemployment rate. Their relative earnings are rising and are higher than the average earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be as numerous as over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment in the life sciences and as professors than as logging and forestry workers, supervisors and machine operators. These occupations are concentrated in the public administration, logging and forestry industries, which are expected to exhibit below average growth over the remainder of the decade.

## Work Life of Recent Graduates

1992



**See also:** This Field of Study Code: U66. Related Codes: C62, C63, C65. Vol. 1 Occupations Cross-index: 212, 222, 412, 821, 842.

## Work Prospects

1995 to 2000



How will  
labour market  
conditions  
change  
for these  
graduates?





# Veterinary Sciences and Medicine

Undergraduate University (4 years)

## Program of Study

Students enrolled in this program learn the concepts and principles of veterinary medicine.

- Veterinary sciences and medicine is offered at universities in Quebec, Prince Edward Island, Ontario and Saskatchewan.

**Prerequisites:** In general, applicants must have completed secondary school with high marks in mathematics, biology and physics. Quebec students must have a Diploma of Collegial Studies. Applicants must pass an interview and entrance examination, undergo a medical exam and provide a letter of recommendation. Preference is given to people who have experience working with animals.

## Full-Time Earnings

1992

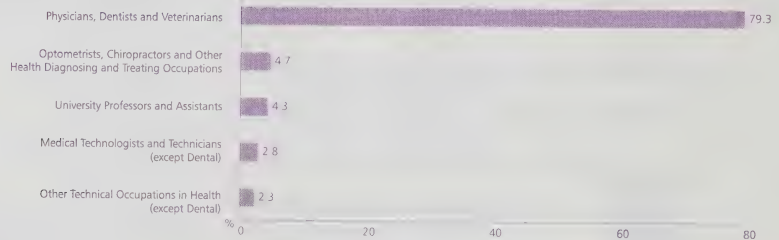


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



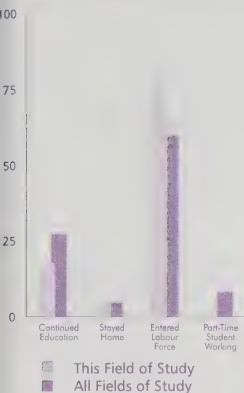
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	76%	71%
Are they satisfied with their work?	100%	91%
Does their work directly match their training?	79%	57%
Do they feel overqualified for their work?	6%	28%

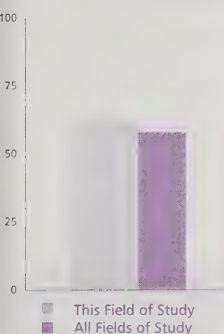
## Where Did They Go?

1992



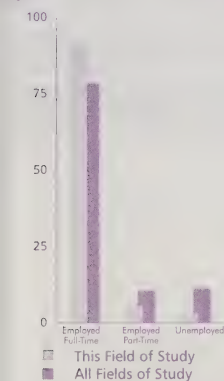
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 300 students graduated in veterinary sciences and medicine. Almost all found related employment, usually in the agricultural sector. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time work, and one out of 20 found part-time work; the unemployment rate for these graduates is very low.
- Two years after graduation, full-time earnings are significantly higher than the average for other graduates at this level, although, between two and five years after graduation, income growth is below average.
- Women account for approximately 63% of graduates, compared with 45% about 10 years ago.
- These graduates are highly specialized and work closely with technologists related to animal care.
- Few graduates in veterinary science and medicine change jobs. The majority are in the same positions five years after graduation as they were in three years after receiving their degree.

## Work Prospects

The current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their relative earnings are rising and higher than earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen yet remain good.

- Job openings are expected to be less numerous than over the previous five-year period, while the number of people with the requisite skills for these jobs is expected to increase. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as veterinarians and university professors than as laboratory technologists. The poor labour market conditions follow from the fact that there will be an anticipated oversupply of graduates.

See also: This Field of Study Code: U67.  
Vol. 1 Occupations Cross-index: 311, 321, 412.

## Work Prospects

1995 to 2000





# Agricultural Technologies

Career Program, Community College (2 years)

## Program of Study

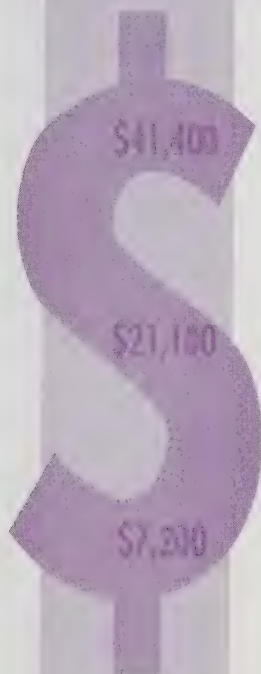
Students receive training in agricultural technology and business, biology, polytechnics and animal science.

- This program is offered at community colleges in every province except Newfoundland and Nova Scotia.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French), mathematics and preferably physics and chemistry.

## Full-Time Earnings

1992

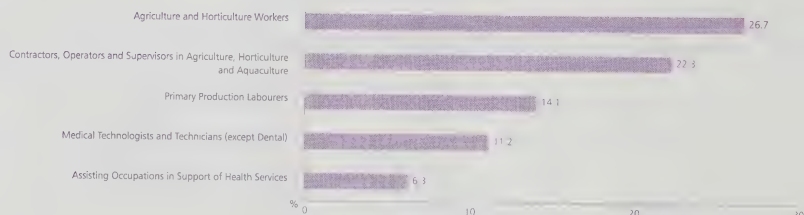


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



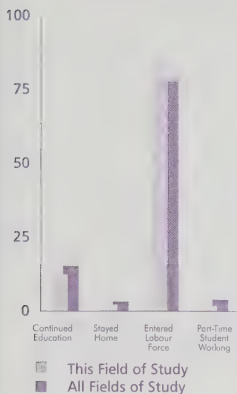
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	77%	74%
Are they satisfied with their work?	93%	93%
Does their work directly match their training?	48%	61%
Do they feel overqualified for their work?	37%	34%

## Where Did They Go?

1992



## After Graduation

In 1994, 1,350 students received a college diploma in agriculture. Graduates work in a variety of occupations but usually find employment in their field of study. Some work in health care, but most can be found in agriculture. Information from various graduate surveys shows that:

- Over four out of five graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is about the same as for other community college graduates.
- Two years after graduation, full-time earnings are far below the average for other community college graduates and, between two and five years after graduation, increase at half the average rate.
- Women account for approximately 53% of graduates, compared to 44% about 10 years ago.
- These graduates often enter the same occupations as graduates with a degree in agriculture or animal and plant sciences or trade-vocational graduates in agriculture.
- Few graduates seem to change jobs, although their mobility is difficult to assess since they are employed in a wide range of occupations.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a rising unemployment rate. Their earnings are declining and low relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While new job openings are expected to remain about the same as over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase slightly. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates have more success when searching for employment as farm workers, farm managers, nursery and greenhouse operators, and in landscaping and aquaculture. These occupations are concentrated in the agriculture industry which is expected to exhibit almost no employment growth over the remainder of the decade.

See also: This Field of Study Code: C61. Related Codes: U61, U63, T61. Vol. 1 Occupations Cross-index: 321, 825, 843, 861.

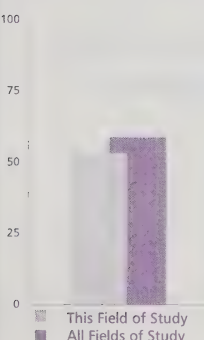
## Work Prospects

1995 to 2000



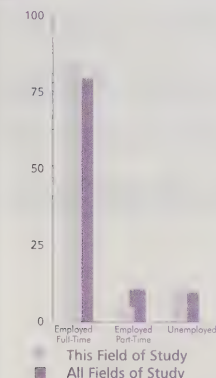
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Environmental and Conservation Technologies

Career Program, Community College (2 years)

## Program of Study

Students receive training in a variety of specialized fields such as pollution control, land resources, wildlife and forest conservation, water sciences and air purification.

- This program is offered at community colleges in every province except Newfoundland.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French) and at least two science courses. Applicants must also take a mathematics diagnostic test.

## Full-Time Earnings

1992

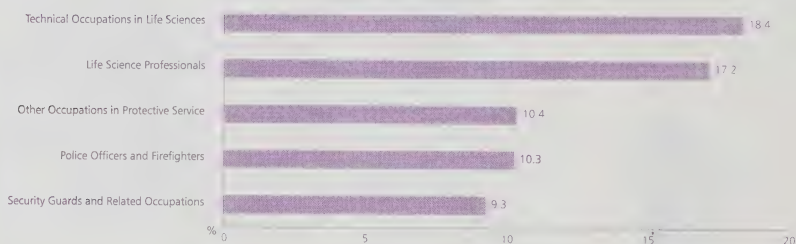


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



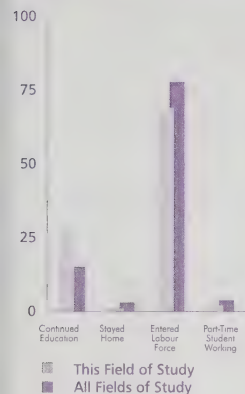
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	78%	74%
Are they satisfied with their work?	92%	93%
Does their work directly match their training?	73%	61%
Do they feel overqualified for their work?	32%	34%

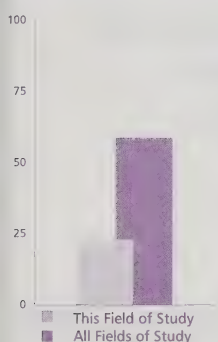
## Where Did They Go?

1992



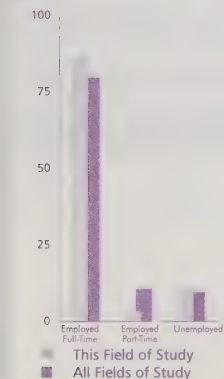
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 780 students graduated in environmental and conservation technologies. They found work in a variety of fields, usually as agronomic technicians or conservation officers with the provincial public service. Information from various graduate surveys shows that:

- Nearly nine out of 10 graduates found full-time employment, and several found part-time employment; the unemployment rate for these graduates is slightly higher than that of other community college graduates.
- Two years after graduation, full-time earnings are slightly higher than the average for other community college graduates and increase at an above average rate.
- Women account for approximately 23% of graduates, compared to 32% about 10 years ago.
- These graduates often work in the same occupations as graduates from protective services (conservation officers), forestry technologies and resource processing technologies.
- A large number of graduates change jobs. Those employed as life sciences technicians, engineering technicians or conservation officers two years after graduation have become managers or administrators three years later.

## Work Prospects

The current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a falling but above average unemployment rate. Their earnings are average but declining relative to the earnings of other graduates at the same level of studies. A significantly smaller proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen yet remain fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase more rapidly. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more success when searching for employment as forestry and geological technologists and technicians. These occupations are concentrated in provincial governments which are expected to downsize over the remainder of the decade.

See also: This Field of Study Code: C62. Related Codes: C63, C65. Vol. 1 Occupations Cross-index: 212, 222, 842.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?



# Forestry Technologies

Career Program, Community College (2 years)

## Program of Study

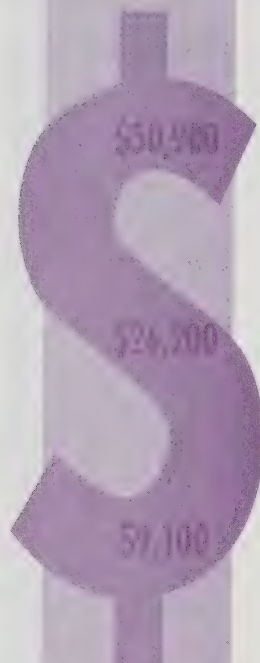
Students enrolled in this program receive training in forestry management, forest research, forestry and silviculture.

- It is offered at community colleges in every province except Prince Edward Island, Manitoba and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French) and at least two science courses. Applicants must also take a mathematics diagnostic test.

## Full-Time Earnings

1992

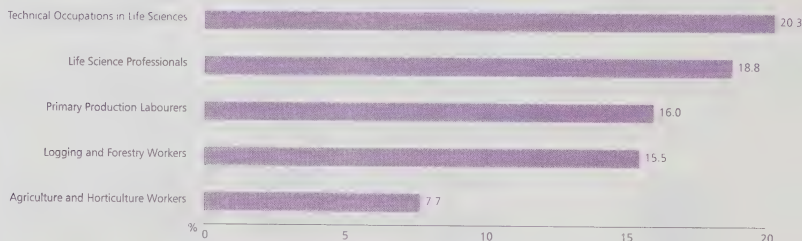


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	77%	74%
Are they satisfied with their work?	97%	93%
Does their work directly match their training?	71%	61%
Do they feel overqualified for their work?	35%	34%



## After Graduation

In 1994, 500 students graduated in forestry technologies. Most found employment in the technical occupations in the life sciences. Others work in forestry occupations and are usually employed in the forestry industry. Information from various graduate surveys shows that:

- Nearly nine out of 10 graduates found employment, virtually all full-time; the unemployment rate for these graduates is slightly higher than that of other community college graduates.
- Two years after graduation, full-time earnings are about the same as for other community college graduates and, between two and five years after graduation, increase at about the average rate.
- Women account for approximately 18% of graduates, compared to 16% about 10 years ago.
- Graduates employed in the life sciences work with graduates of environment and conservation programs.
- Few graduates change jobs. The majority of those working in life sciences occupations two years after graduation are in the same jobs three years later. Those employed as conservation officers or forestry workers two years after graduation are much more likely to change jobs.

## Work Prospects

The current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a falling but above average unemployment rate. Their earnings are average but declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

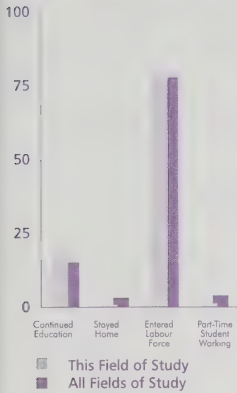
Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more success when searching for employment as logging machine operators or logging and forestry labourers than as forestry professionals or technologists and technicians. These occupations are concentrated in the forestry industry which is expected to exhibit almost no employment growth over the remainder of the decade.

**See also:** This Field of Study Code: C63. Related Codes: C62, C65. Vol. 1 Occupations Cross-index: 212, 222, 821, 842, 861.

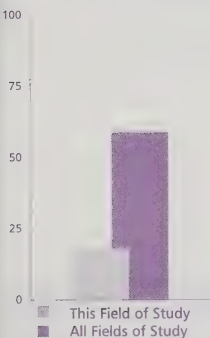
### Where Did They Go?

1992



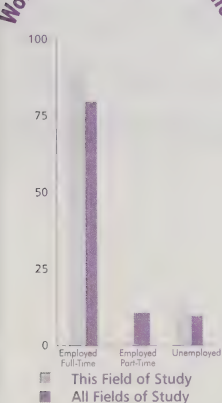
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?





# Primary Technologies - Other

Career Program, Community College (2 years)

## Program of Study

Students receive training in geology and prospecting, drilling, extracting, mining and petroleum technologies, fishing, hunting and trapping.

- This program is offered at community colleges in every province except Prince Edward Island, New Brunswick, Manitoba and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in English (French), biology, chemistry and mathematics.

## Full-Time Earnings

1992

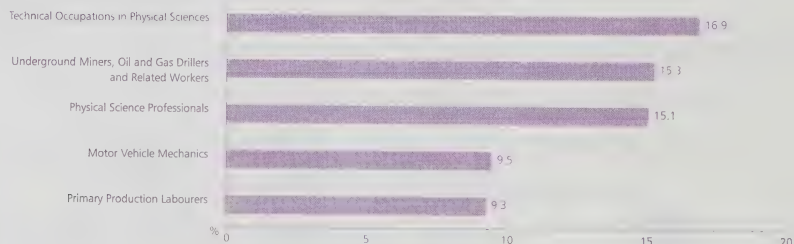


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



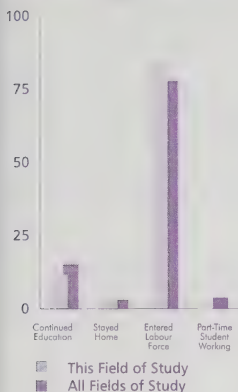
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	
	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	62%	74%
Are they satisfied with their work?	92%	93%
Does their work directly match their training?	46%	61%
Do they feel overqualified for their work?	40%	34%

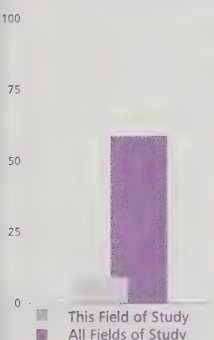
## Where Did They Go?

1992



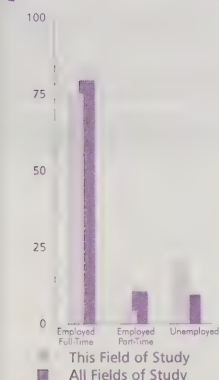
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 410 students graduated in other primary technologies. Most found employment with chemical and mining companies as miners or physical sciences technicians. Information from various graduate surveys shows that:

- Three out of four graduates found full-time employment, and less than one out of 20 found part-time employment; the unemployment rate for these graduates is twice as high as for other community college graduates.
- Two years after graduation, full-time earnings are much higher than the average for other community college graduates but, between two and five years after graduation, increase at half the average rate.
- Women account for approximately 11% of graduates, compared with 9% about 10 years ago.
- These graduates often find work in the same occupations as graduates with university degrees in geology or geological engineering, community college graduates in agricultural and forestry technologies, and trade-vocational graduates in transportation and mechanical technologies and heavy-equipment operation.
- A fairly high number of graduates change jobs, especially those employed as technicians two years after graduation. Five years after graduation, some have become engineers or miners. Those employed as miners two years after graduation are usually in the same jobs three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a falling but above average unemployment rate. Their earnings are average but declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain poor.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition among these graduates will be weak.
- These graduates will have more success when searching for employment as underground mine drillers than as surveyors, mappers or general mine labourers. These occupations are concentrated in the mining industry which is expected to exhibit improved growth over the remainder of the decade.

See also: This Field of Study Code: C64.  
Vol. 1 Occupations Cross-index: 221, 822, 823, 861.

## Work Prospects

1995 to 2000





# Resource Processing Technologies

Career Program, Community College (2 years)

## Program of Study

Students receive training in pulp and paper processing, processing of wood products, metal fabricating, petroleum refining and food processing.

- This program is offered at community colleges except in the Atlantic provinces, Manitoba and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in mathematics, chemistry, biology, physics and English (French). A mathematics diagnostic test is often required.

## Full-Time Earnings

1992

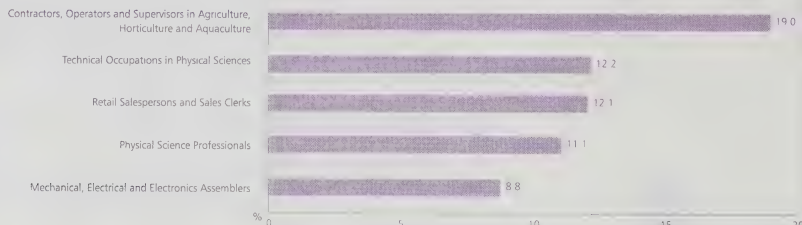


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

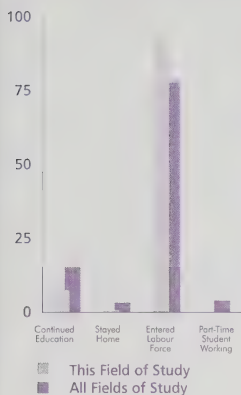
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	63%	74%
Are they satisfied with their work?	90%	93%
Does their work directly match their training?	60%	61%
Do they feel overqualified for their work?	35%	34%



## Where Did They Go?

1992



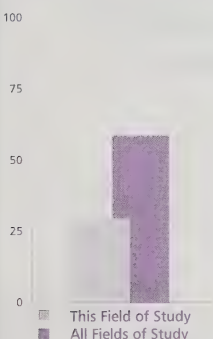
## After Graduation

In 1994, 160 students graduated in primary resource processing technologies. In most cases, they were employed as physical sciences technicians in agriculture or as contractors in agriculture, horticulture or aquaculture. Information from various graduate surveys shows that:

- Nearly nine out of 10 graduates found employment, virtually all full-time; the unemployment rate for these graduates is slightly higher than that of other community college graduates.
- Two years after graduation, full-time earnings are higher than the average for other community college graduates and, between two and five years after graduation, increase at about the average rate.
- Women account for approximately 30% of graduates, compared to 29% about 10 years ago.
- These graduates often work in the same occupations as graduates from chemical engineering technologies, forestry technologies, and environmental and conservation technologies.
- A fairly large number of graduates change jobs. Several who were working in physical sciences two years after graduation worked in engineering three years later.

## Percentage of Women

1994



## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a falling but above average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition among these graduates will be average.
- These graduates search for employment as agriculture and horticulture supervisors, chemical technologists, salespersons, mechanical and electrical assemblers and manufacturing and agriculture labourers. Graduates will have more success when searching for employment as chemical technologists than as agriculture/horticulture contractors or labourers. The stable labour market conditions follow from the fact that these occupations are concentrated in the agriculture, chemical, motor vehicle and parts and food processing industries which are expected to exhibit improved growth over the remainder of the decade.

## Work Prospects

1995 to 2000



See also: This Field of Study Code: C65. Related Codes: C62, C63. Vol. 1 Occupations Cross-index: 221, 825, 961.





# Agricultural Technologies

Trade/Vocational College (6 months)

## Program of Study

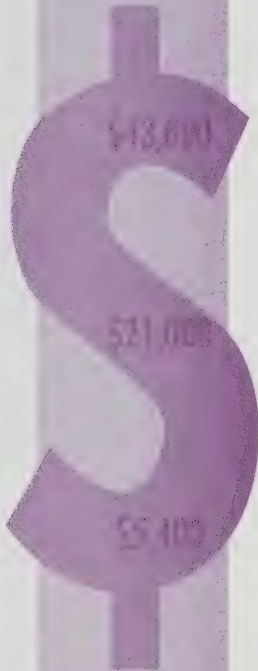
Students receive training in agricultural technology, agricultural business, plant science, horticulture, landscaping and animal science.

- This program is offered in every province except Newfoundland and Prince Edward Island.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

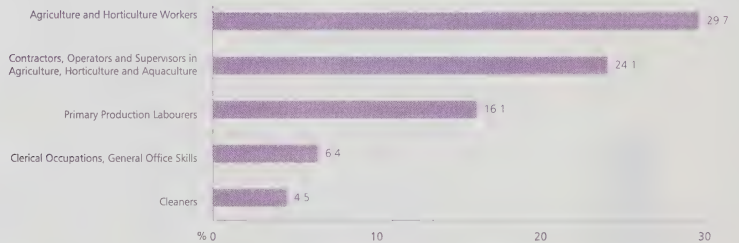


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



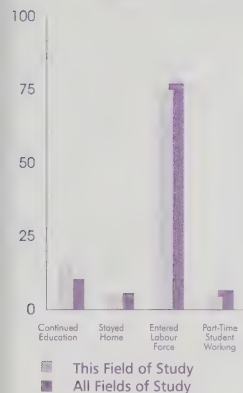
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	81%	74%
Are they satisfied with their work?	94%	92%
Does their work directly match their training?	35%	47%
Do they feel overqualified for their work?	41%	36%

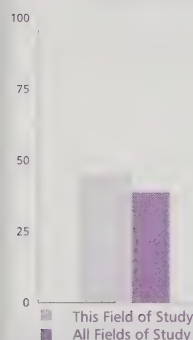
## Where Did They Go?

1992



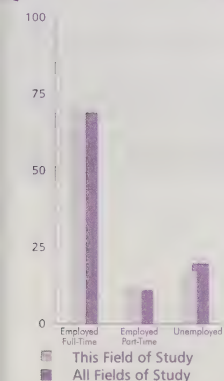
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 300 students received a diploma in agriculture from a trade/vocational college. Most found work in their area of study and are usually employed in the agriculture industry. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and more than one out of 10 found part-time employment; the unemployment rate for these graduates is below the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are below the average for other trade/vocational graduates and increase at a below average rate for the next three years.
- Women account for approximately 46% of graduates, compared with 32% about 10 years ago.
- These graduates often enter the same occupations as other agricultural, animal and plant, biology, forestry and heavy equipment technologies graduates.
- Very few graduates change jobs within the first five years of graduation. The majority of those employed on a farm two years after graduation are still in the same job three years later. Some graduates enter farm management or administration two years after graduation and are in the same jobs three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be about the same as over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase slightly faster. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as agriculture and horticulture workers than as primary production labourers. These occupations are concentrated in the agriculture and construction industries which are expected to exhibit weak growth over the remainder of the decade.

See also: This Field of Study Code: T61. Related Code: C61.  
Vol. 1 Occupations Cross-index: 825, 843, 861.

## Work Prospects

1995 to 2000





# Food Processing Technologies

Trade/Vocational College (5 months)

## Program of Study

Students receive training in processing meat, seafood, dairy products and other foods.

- This program is offered in every province.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

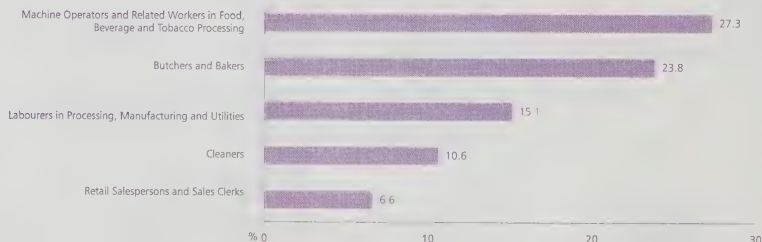


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

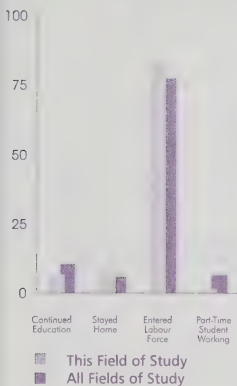
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	66%	74%
Are they satisfied with their work?	91%	92%
Does their work directly match their training?	40%	47%
Do they feel overqualified for their work?	38%	36%



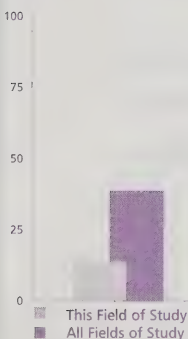
## Where Did They Go?

1992



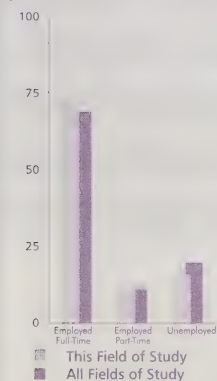
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 610 students received a diploma in food processing technologies from a trade/vocational college and the majority found employment in their field. These graduates are usually employed in the food processing industry or in retail sales. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment and more than one out of 10 found part-time employment; the unemployment rate for these graduates is below the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are below the average for other trade/vocational graduates and increase at about the average rate for the next three years.
- Women account for approximately 14% of graduates, the same rate as about 10 years ago.
- This field is fairly specialized and graduates usually work with equipment operators or graduates in other food processing technologies.
- Relatively few graduates change jobs in their first five years after graduation. The majority of those employed in food processing occupations two years after graduation are in the same field three years later. Some have become managers or administrators.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet still remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition among these graduates will be average.
- These graduates will have more difficulty when searching for employment as food and beverage machine operators, butchers and bakers than as labourers in food processing. These occupations are concentrated in the accommodation and food service industry which is expected to exhibit above average growth over the remainder of the decade. The labour market conditions will be hindered by expected weak growth in the food processing sector.

See also: This Field of Study Code: T62.  
Vol. 1 Occupations Cross-index: 625, 642, 664, 946, 961.

## Work Prospects

1995 to 2000







# Chemistry

Master's University (3 to 4 years)

## Program of Study

Students specialize in such areas as organic chemistry, inorganic chemistry, quantum chemistry, analytic chemistry, biochemistry and radiochemistry.

- This program is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in chemistry or the equivalent. An interview, letters of recommendation and a graduate admissions test are also required.

## Full-Time Earnings

1992

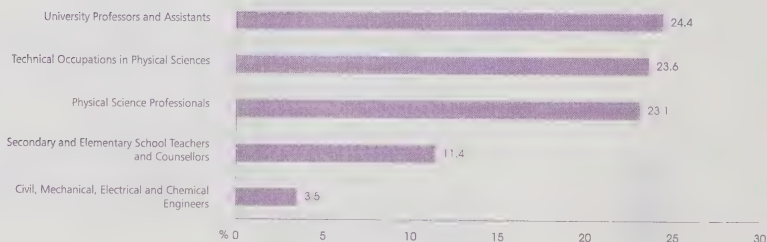


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



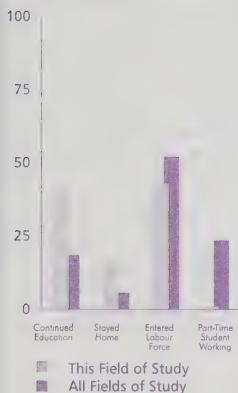
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	78%	83%
Are they satisfied with their work?	93%	95%
Does their work directly match their training?	80%	69%
Do they feel overqualified for their work?	47%	57%

## Where Did They Go?

1992



## After Graduation

In 1994, 220 students received a master's degree in chemistry, and the majority found work in their field. Many teach at the university level. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 14 found part-time employment; the unemployment rate for these graduates is much higher than for other master's graduates.
- Two years after graduation, full-time earnings are far below the average for other master's graduates but increase at two and a half times the average rate for the next three years.
- Women account for approximately 36% of graduates, compared with 28% about 10 years ago.
- These graduates usually enter the same occupations as chemical technology graduates and chemistry graduates with an undergraduate degree.
- The majority of graduates employed as teachers change jobs between the third and fifth years after graduation. None of the graduates employed as chemists changed jobs by the fifth years of their careers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher unemployment rate than average. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as university professors and assistants, and secondary and elementary school teachers than as chemists and chemical technologists. The labour market conditions for the latter occupations follow from the fact that they are concentrated in the chemicals and professional services industries which are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: M71. Related Code: U71.  
Vol. 1 Occupations Cross-index: 211, 221, 321, 412, 414.

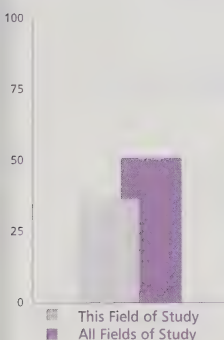
## Work Prospects

1995 to 2000



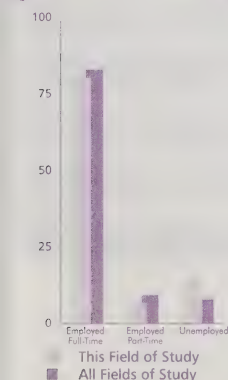
## Percentage of Women

1994



## Work Life of Recent Graduates

1992





# Computer Science

Master's University (1 or 2 years)

## Program of Study

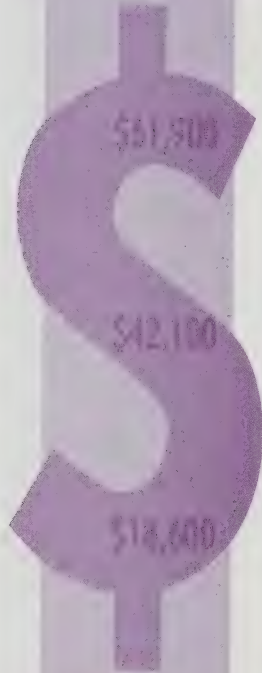
This program covers such areas as the theory of computing, database management systems, scientific and business applications, programming, and computer hardware and software design.

- It is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in computer science or the equivalent. An interview, letters of recommendation and a graduate admissions test are also required.

## Full-Time Earnings

1992

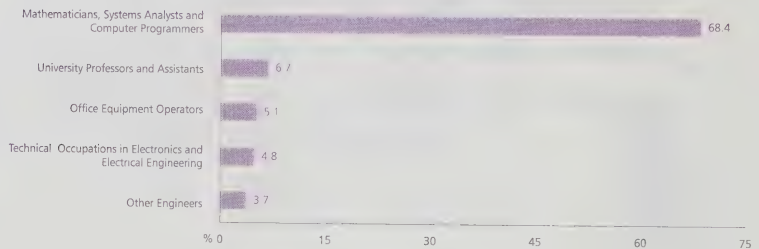


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

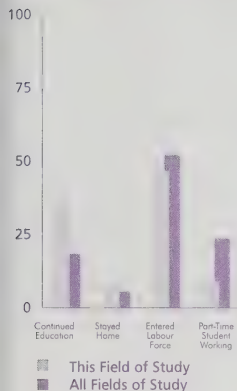
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	90%	83%
Are they satisfied with their work?	95%	95%
Does their work directly match their training?	73%	69%
Do they feel overqualified for their work?	61%	57%



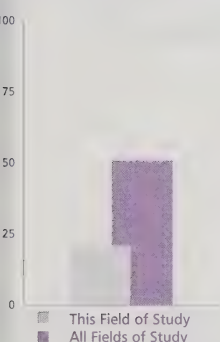
## Where Did They Go?

1992



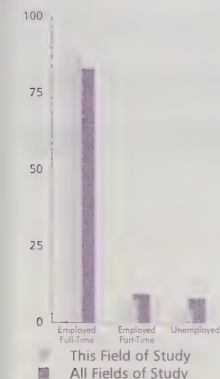
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 360 students received a master's degree in computer science. The majority found work in their field and are employed in education or the computer industry. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time employment, and one out of 14 found part-time employment; the unemployment rate for these graduates is half the rate for other master's graduates.
- Two years after graduation, full-time earnings are somewhat below the average for other master's graduates and increase at about the average rate over the next three years.
- Women account for approximately 21% of graduates, compared with 18% about 10 years ago.
- These graduates often enter the same occupations as mathematics, electrical/electronic engineering and other computer science graduates.
- Few graduates change jobs. The majority of those employed as analysts or programmers two years after graduation are in the same jobs three years later. A few have become administrators. In addition, those employed in teaching two years after graduation rarely change jobs by the fifth year of their careers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to increase at the same pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as university professors than as computer programmers and systems analysts. The labour market conditions for the latter occupations follow from the fact that they are concentrated in the business services, finance and insurance and real estate industries which are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: M72. Related Code: U72.  
Vol. 1 Occupations Cross-index: 021, 142, 216, 224, 412.

## Work Prospects

1995 to 2000







# Geology

Master's University (2 years)

## Program of Study

Students specialize in crystallography, geomorphology, petrology and mineralogy.

- This program is offered at universities in every province except Prince Edward Island, Newfoundland, New Brunswick, Nova Scotia and British Columbia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in geology or the equivalent. An interview, letters of recommendation and a graduate admissions test are also required.

## Full-Time Earnings

1992

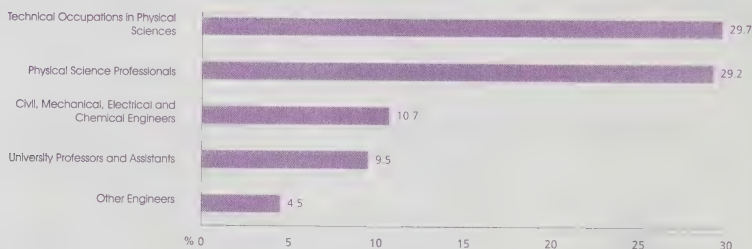


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



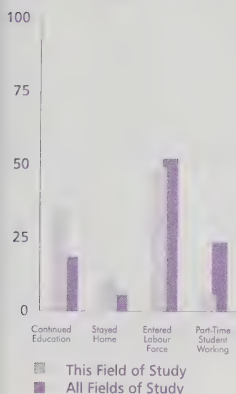
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	64%	83%
Are they satisfied with their work?	95%	95%
Does their work directly match their training?	67%	69%
Do they feel overqualified for their work?	41%	57%

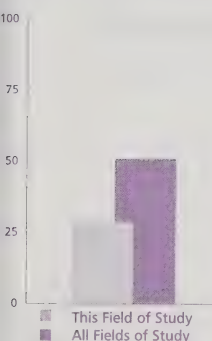
## Where Did They Go?

1992



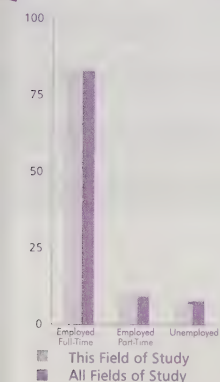
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 220 students received a master's degree in geology, and the majority found employment in their field. Many are employed as engineers in the engineering services industry. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is slightly lower than for other master's graduates.
- Two years after graduation, full-time earnings are below the average rate for other master's graduates but increase slightly faster than average for the next three years.
- Women account for approximately 29% of graduates, compared with 19% about 10 years ago.
- These graduates often enter the same occupations as undergraduates with a degree in geology or geological engineering.
- Few graduates change jobs; the majority of those employed as geologists two years after graduation are in the same jobs three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more difficulty when searching for employment as university professors and assistants than as geologists, geological technologists and geological engineers. The better labour market conditions for the latter occupations follow from the fact that they are concentrated in the chemicals, mining and professional services industries which are expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: M73. Related Code: U73.  
Vol. 1 Occupations Cross-index: 211, 213, 221, 412, 414.

## Work Prospects

1995 to 2000





# Mathematics

Master's University (1 to 3 years)

## Program of Study

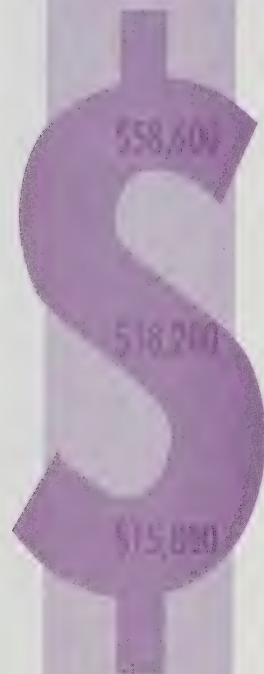
Students specialize in such areas as probability and statistics, actuarial mathematics, mathematical software and programming, analytical number theory and linear programming.

- This program is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in mathematics or the equivalent. An interview, letters of recommendation and a graduate admissions test are also required.

## Full-Time Earnings

1992

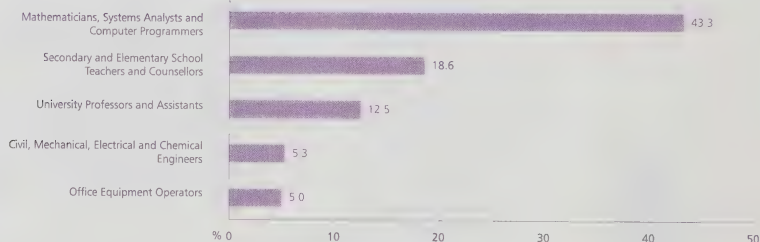


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

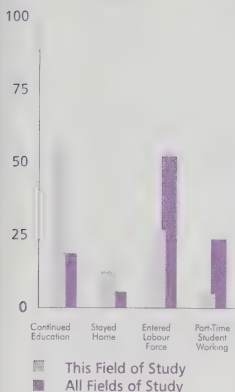
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	81%	83%
Are they satisfied with their work?	94%	95%
Does their work directly match their training?	57%	69%
Do they feel overqualified for their work?	50%	57%



## Where Did They Go?

1992



## After Graduation

In 1994, 300 students received a master's degree in mathematics, and the majority found work in their field. Some are employed as teachers. Information from various graduate surveys shows that:

- Two out of three graduates found full-time employment, and one out of five found part-time employment; the unemployment rate for these graduates is double the rate for other master's graduates.
- Two years after graduation, full-time earnings are far below the average for other master's graduates but increase at one and a half times the average rate for the next three years.
- Women account for approximately 30% of graduates, compared with 23% about 10 years ago.
- These graduates often find work in the same occupations as computer science and commerce graduates.
- Few graduates seem to change jobs. The majority of those employed as mathematicians, statisticians or teachers two years after graduation are in the same jobs three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

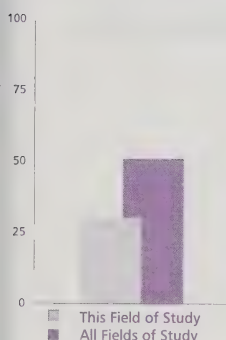
- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and university professors and assistants than as computer programmers and systems analysts. The poor labour market conditions for the former group of occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade. The business and personal services industries, which employ almost half of new graduates, are expected to exhibit above average growth over the same period.

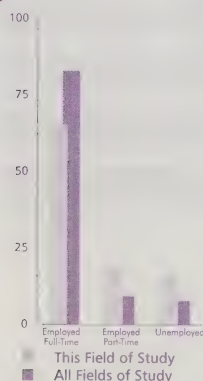
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



See also: This Field of Study Code: M74. Related Code: U74.  
Vol. 1 Occupations Cross-index: 021, 213, 216, 412, 414.

## Work Prospects

1995 to 2000



How will  
labour market  
conditions  
change  
for these  
graduates?





# Physics

Master's University (1 or 2 years)

## Program of Study

Students specialize in such areas as astronomy, quantum mechanics, aeronautics, biophysics, condensed matter physics, geophysics, optics and particle physics, and mathematical, medical, molecular, nuclear, plasma and space physics.

- This program is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in physics or the equivalent. An interview, letters of recommendation and a graduate admissions test are also required.

## Full-Time Earnings

1992

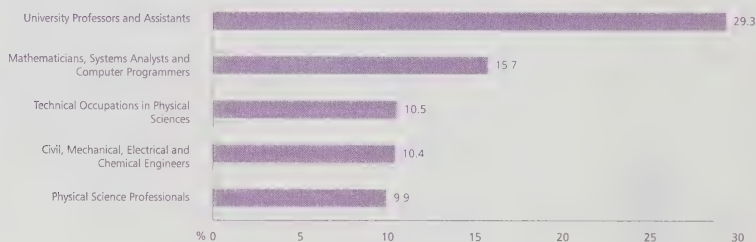


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



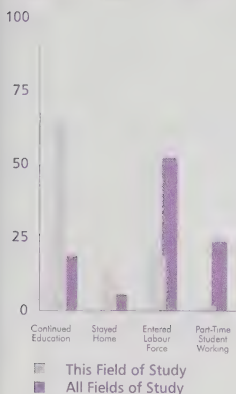
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	74%	83%
Are they satisfied with their work?	90%	95%
Does their work directly match their training?	70%	69%
Do they feel overqualified for their work?	54%	57%

## Where Did They Go?

1992



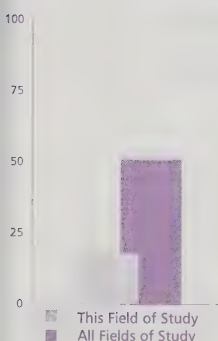
## After Graduation

In 1994, 280 students received a master's degree in physics and usually found work as teachers. Others are mathematicians, statisticians or systems analysts. Most graduates are employed in teaching at the university level. Information from various graduate surveys shows that:

- Only three out of four graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is more than double the rate for other master's graduates.
- Two years after graduation, full-time earnings are far below the average rate for other master's graduates but increase at twice the average rate for the next three years.
- Women account for approximately 18% of graduates, compared with 9% about 10 years ago.
- These graduates often enter the same occupations as mechanical engineering, geology, mathematics and computer science graduates.
- A large number of graduates change jobs. The majority of those employed as teachers two years after graduation changed jobs three years later, usually to become physicists. On the other hand, those employed as physicists two years after graduation usually hadn't changed jobs by the fifth year of their careers.

## Percentage of Women

1994



## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a much higher than average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as university professors and assistants, and secondary and elementary school teachers than as technologists, physicists, systems analysts and engineers. The poor labour market conditions for the teaching occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade. The chemicals and professional services industries are expected to exhibit above average growth over the same period.

See also: This Field of Study Code: M76. Related Code: U76.  
Vol. 1 Occupations Cross-index: 211, 216, 412, 413, 414.

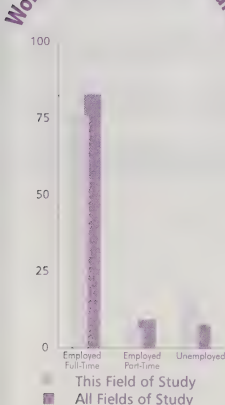
## Work Prospects

1995 to 2000



## Work Life of Recent Graduates

1992





# Chemistry

Undergraduate University (3 or 4 years)

## Program of Study

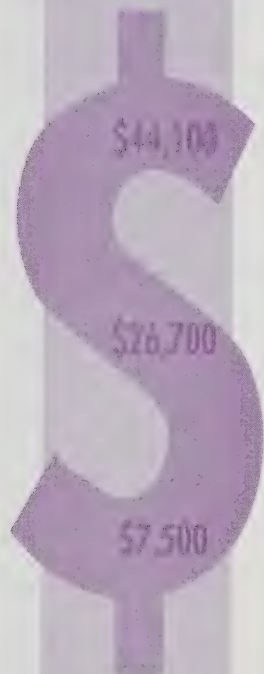
Students enrolled in this program study such disciplines as organic chemistry, inorganic chemistry, physical chemistry, quantum chemistry and analytical chemistry.

- Chemistry is offered at universities in most provinces except Prince Edward Island and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have a high school diploma (Diploma of Collegial Studies in Quebec) and high marks in mathematics, chemistry, physics and biology.

## Full-Time Earnings

1992

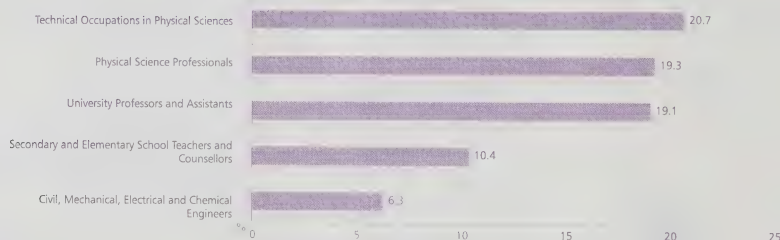


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

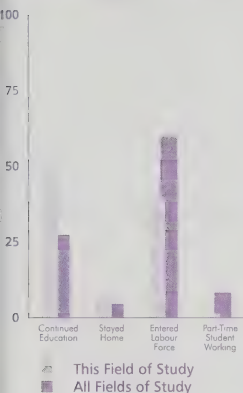
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	64%	71%
Are they satisfied with their work?	90%	91%
Does their work directly match their training?	56%	57%
Do they feel overqualified for their work?	21%	28%



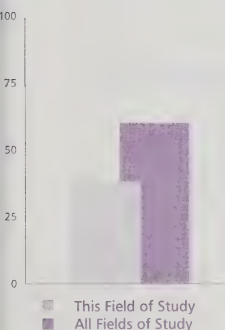
## Where Did They Go?

1992



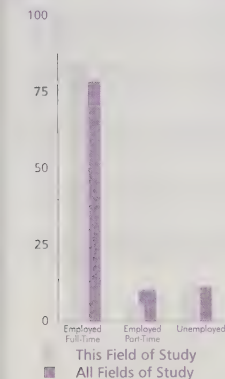
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,030 students graduated in chemistry. Most found jobs as chemical technologists, chemists or teachers and are employed in a wide range of fields. They work primarily in research and development labs, and in the pharmaceutical, manufacturing, health and education sectors. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time work and one out of 20 found part-time work; the unemployment rate for chemistry graduates is similar to that for other graduates at this level.
- Two years after graduation, full-time earnings are much lower than the average for other graduates at this level, although they increase at about the average rate between the second and fifth years of their careers.
- Women account for approximately 37% of graduates, compared with 29% about 10 years ago.
- Chemistry graduates often find work in the same occupations as master's graduates in chemistry or community college graduates in chemical technologies.
- Few chemistry graduates change jobs. The majority of graduates working in the chemical industry two years after graduation are in the same field three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their relative earnings are declining and low relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as university professors and assistants and secondary and elementary school teachers than as professionals or technologists in the physical sciences. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in the chemicals and professional services industries. These industries are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: U71. Related Code: M71.  
Vol. 1 Occupations Cross-index: 211, 221, 321, 412, 414.

## Work Prospects

1995 to 2000



How will labour market conditions change for these graduates?





# Computer Science

Undergraduate University (3 years)

## Program of Study

This program provides training in the concepts and principles of computer hardware, software and programming, the theory of computing, scientific and business applications, and business information management.

- Computer science programs are offered at universities in most provinces except Prince Edward Island, Nova Scotia and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.
- Many undergraduate students combine computer science with mathematics, commerce or economics for a double major in complementary disciplines.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics, chemistry, physics and English (French). Quebec students must have a Diploma of Collegial Studies.

Full-Time Earnings

1992

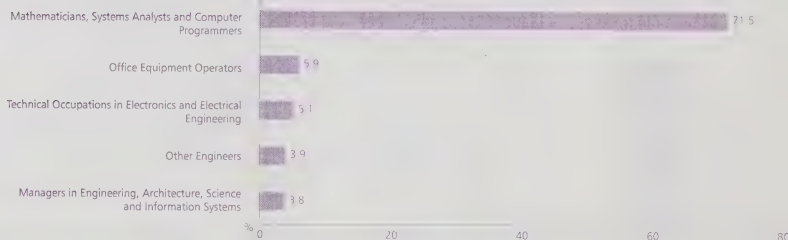


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

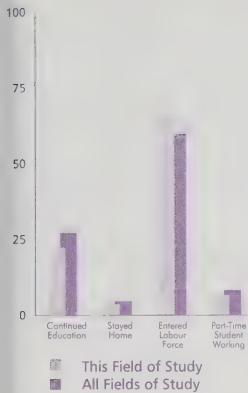
### THIS FIELD OF STUDY

### ALL FIELDS OF STUDY

Would they make the same educational choice again?	87%	71%
Are they satisfied with their work?	95%	91%
Does their work directly match their training?	78%	57%
Do they feel overqualified for their work?	14%	28%

## Where Did They Go?

1992



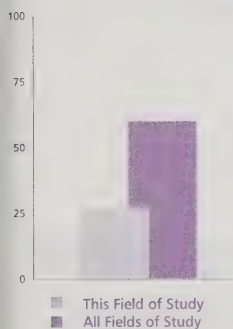
## After Graduation

In 1994, 2,470 students graduated in computer science. The majority found work as analysts or programmers and are usually employed in the business services sector. Information from various graduate surveys shows that:

- More than nine out of 10 graduates found jobs, usually full-time; the unemployment rate for these graduates is significantly lower than for other graduates at this level.
- Two years after graduation, full-time earnings are significantly higher than the average for other graduates at this level and, between two and five years after graduation, increase at an above average rate.
- Women account for approximately 26% of graduates, compared with 28% about 10 years ago.
- These graduates often find work in the same occupations as graduates at this, and other levels of study, from mathematics, commerce and electrical/electronic engineering.
- Not many computer science graduates change jobs. The majority of graduates working as analysts or programmers two years after graduation are in the same jobs three years later, although some have moved on to management or administrative positions. The few graduates employed as managers two years after graduation are much more likely to change jobs. Five years into their careers, several have taken jobs as analysts or programmers.

## Percentage of Women

1994



## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their relative earnings are rising and are higher than the average earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve and become very good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more success when searching for employment as computer programmers and systems analysts than as teachers or managers. The better labour market conditions for the former occupations follow from the fact that they are concentrated in the business services, finance, insurance and real estate industries which are expected to exhibit above average growth over the remainder of the decade.

## Work Prospects

1995 to 2000



See also: This Field of Study Code: U72. Related Codes: M72, C71, T71. Vol. 1 Occupations Cross-index: 021, 142, 216, 224.



## Full-Time Earnings

1992



## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

# Geology

## Undergraduate University (4 years)

### Program of Study

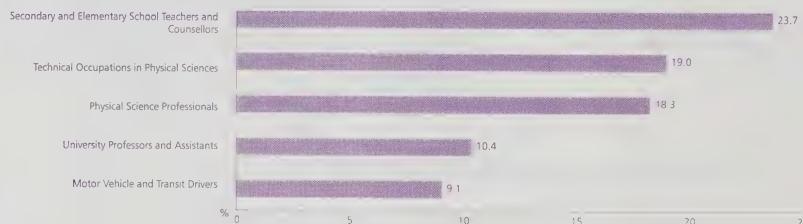
This program includes the study of geology, geochemistry, mineralogy, geodynamics and crystallography.

- Geology is offered at universities in most provinces except Prince Edward Island, Nova Scotia and Newfoundland.

**Prerequisites:** Applicants must have a secondary school diploma (Diploma of Collegial Studies in Quebec) with high marks in mathematics, chemistry and physics.

## Occupations of Graduates

1992



## Graduates Speak Out

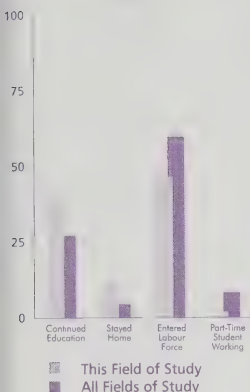
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	50%	71%
Are they satisfied with their work?	91%	91%
Does their work directly match their training?	54%	57%
Do they feel overqualified for their work?	25%	28%



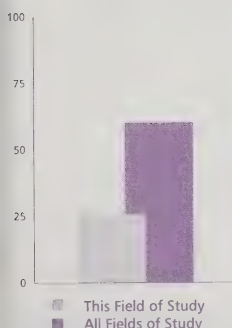
## Where Did They Go?

1992



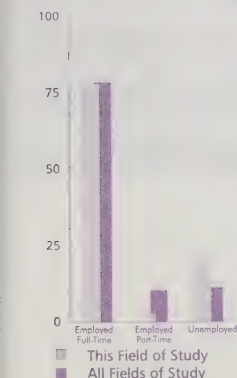
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 330 students graduated in geology. Most found work as geologists or geological technicians. Several became teachers or policy and program officers. Geologists are usually employed in the mining, professional services or education industries. Information from various graduate surveys shows that:

- Four out of five graduates found work, in most cases full-time; the unemployment rate for geology graduates is much higher than for other graduates at this level.
- Two years after graduation, full-time earnings are about the same as for other graduates at this level; between two and five years after graduation, income growth is slightly above average.
- Women account for approximately 25% of graduates, the same percentage as about 10 years ago.
- Graduates usually find work in the same occupations as those with a master's degree in geology.
- The number of graduates who change jobs is relatively low. Most people working as geologists two years after graduation are in the same field three years later. Some have moved into teaching positions.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a much higher than average unemployment rate. Their earnings are average but rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as university professors and assistants or secondary and elementary school teachers than as geologists or geological technologists. The stable labour market conditions follow from the fact that the latter occupations are concentrated in the professional services industries which are expected to exhibit average growth over the remainder of the decade.

See also: This Field of Study Code: U73. Related Code: M73.  
Vol. 1 Occupations Cross-index: 211, 221, 412, 414.

## Work Prospects

1995 to 2000







# Mathematics

Undergraduate University (3 or 4 years)

## Program of Study

Students enrolled in this program study applied mathematics, actuarial mathematics and statistics.

- Mathematics programs are offered at universities in most provinces except Prince Edward Island and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics, chemistry, physics and biology. Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992

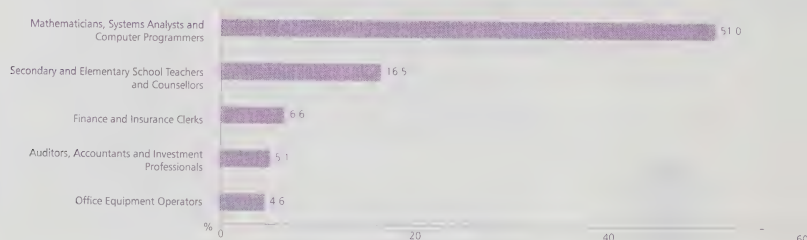


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



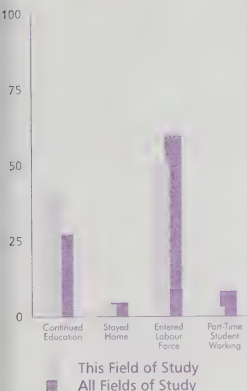
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	70%	71%
Are they satisfied with their work?	90%	91%
Does their work directly match their training?	53%	57%
Do they feel overqualified for their work?	19%	28%

## Where Did They Go?

1992



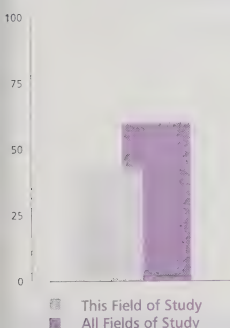
## After Graduation

In 1994, 2,370 students received an undergraduate degree in mathematics. Most found work in their field. Some found jobs in management and others in teaching. These graduates are usually employed by financial, realty and educational institutions. Information from various graduate surveys shows that:

- Four out of five graduates found full-time work, and one out of 10 found part-time work; the unemployment rate for mathematics graduates is higher than that of graduates at this level.
- Two years after graduation, full-time earnings are slightly higher than the average for other graduates at this level and, between two and five years after graduation, increase at one and a half times the average rate.
- Women account for 42% of graduates, compared with 35% about 10 years ago.
- Mathematics graduates usually find work in the same occupations as graduates with a master's degree in mathematics.
- There is relatively little job changing among mathematics graduates. The majority of those employed as mathematicians or statisticians two years after graduation are in the same field three years later. Some have entered management. Graduates who are working as managers two years after graduation have often changed jobs three years later; many have moved into administration.

## Percentage of Women

1994



## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their relative earnings are rising and are higher than the average earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers than as statisticians or actuaries. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in the business services, finance, insurance and real estate industries. These industries are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: U74. Related Code: M74.  
Vol. 1 Occupations Cross-index: 111, 216, 412, 414.

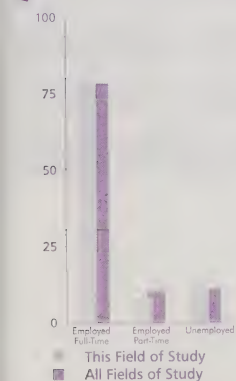
## Work Prospects

1995 to 2000



## Work Life of Recent Graduates

1992





# Physics

Undergraduate University (3 or 4 years)

## Program of Study

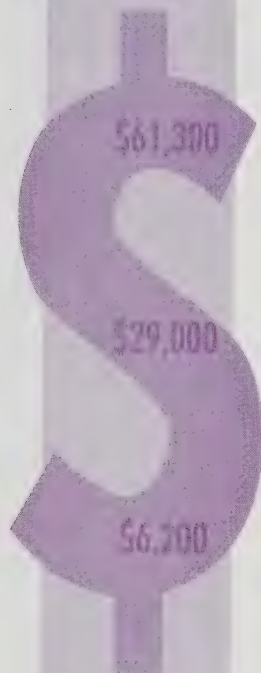
Students enrolled in this program study mathematical physics, astronomy, astrophysics, thermodynamics, mechanics and the properties of matter, optics, electricity and magnetism.

- Physics programs are offered at universities in most provinces except Prince Edward Island and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have a high school diploma (Diploma of Collegial Studies in Quebec) with very high marks in mathematics, chemistry, physics and biology.

## Full-Time Earnings

1992

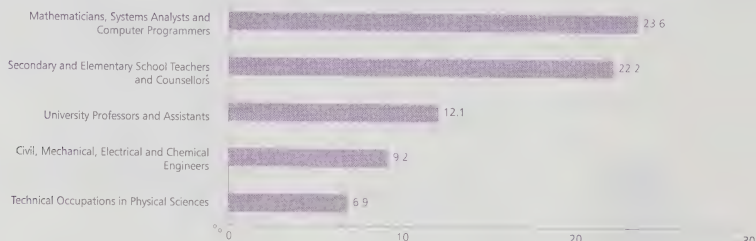


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

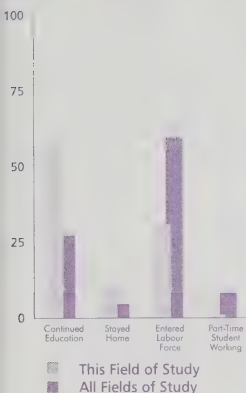
THIS FIELD OF STUDY ALL FIELDS OF STUDY

Would they make the same educational choice again?	53%	71%
Are they satisfied with their work?	89%	91%
Does their work directly match their training?	36%	57%
Do they feel overqualified for their work?	25%	28%



## Where Did They Go?

1992



## After Graduation

In 1994, 650 students graduated in physics and found work in the engineering or teaching fields. Most graduates are employed in the educational system. Information from various graduate surveys shows that:

- Three out of four graduates found full-time work, and one out of 20 found part-time work; the unemployment rate for physics graduates is almost twice as high as that for other graduates at this level.
- Two years after graduation, full-time earnings are somewhat lower than for other graduates at this level but, between two and five years after graduation, increase at two and a half times the average rate.
- Women account for approximately 14% of graduates, compared with 11% about 10 years ago.
- Graduates who go into education work with teaching graduates.
- A large number of graduates change jobs, except those employed as teachers, administrators or programmer analysts.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a much higher than average unemployment rate. Their earnings are average but declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as teachers than as physicists, physical science technologists and systems analysts. These graduates are concentrated in the education sector, which is expected to have declining growth, and the professional services industries, which are expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: U76. Related Code: M76.  
Vol. 1 Occupations Cross-index: 211, 213, 216, 412, 414.

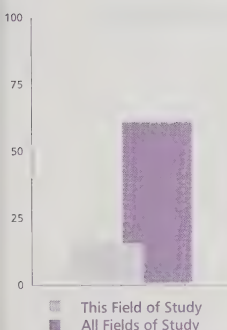
## Work Prospects

1995 to 2000



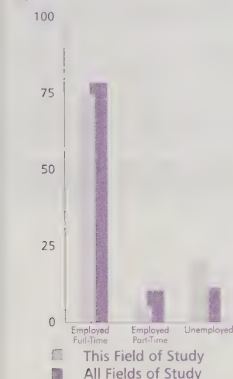
## Percentage of Women

1994



## Work Life of Recent Graduates

1992







# Computer Science

Career Program, Community College (2 years)

## Program of Study

Students learn programming languages, computer hardware systems and the scientific and business applications of some software, including data processing, database management and word processing.

- This program is offered at community colleges in every province.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and good marks in mathematics and English (French). They must also have some keyboarding skills. Preference is given to those students who have completed courses in management and computer science. Students are also required to pass examinations in mathematics, English (French) and computer science, and undergo an interview.

## Full-Time Earnings

1992

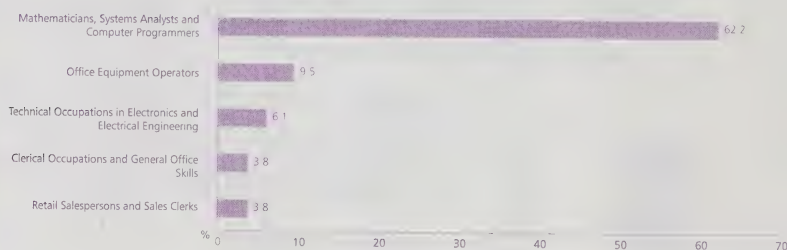


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	83%	74%
Are they satisfied with their work?	94%	93%
Does their work directly match their training?	73%	61%
Do they feel overqualified for their work?	30%	34%

## After Graduation

In 1994, 3,370 students received a college diploma in computer science. The majority found work as systems analysts, usually in the business services sector. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is slightly lower than for other community college graduates.
- Two years after graduation, full-time earnings are higher than the average for other community college graduates; between two and five years after graduation, income growth is about average.
- Women account for approximately 35% of graduates, compared with 46% about 10 years ago.
- These graduates often find employment in the same occupations as accounting, management and administration graduates.
- Not many graduates change jobs. The majority of those working as systems analysts two years after graduation are in the same positions three years later. Some have found work as managers or administrators. Graduates working as electronic equipment operators two years after graduation were much more likely to change jobs. Five years into their careers, a large number of them were working as systems analysts.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a below average but rising unemployment rate. Their earnings are higher than average but declining relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

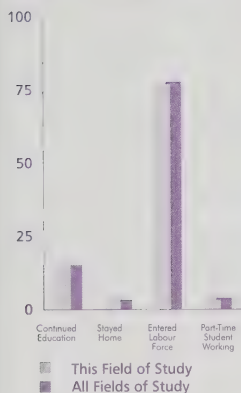
Over the next five years, the labour market situation for these graduates is expected to improve but remain fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a slightly slower pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more success when searching for employment as computer operators and electronic technologists than as systems analysts and computer programmers. These occupations are concentrated in the business services, finance, insurance and real estate and government sectors of the economy. The business services sector will generate the majority of job opportunities.

See also: This Field of Study Code: C71. Related Codes: U73, T71.  
Vol. 1 Occupations Cross-index: 021, 142, 216, 224.

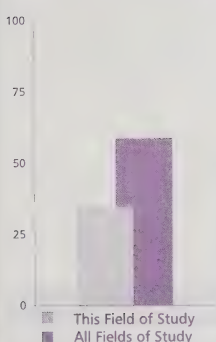
### Where Did They Go?

1992



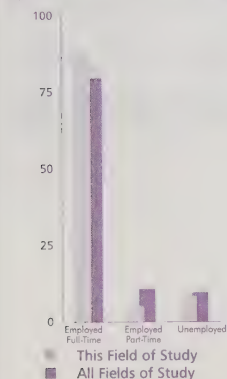
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

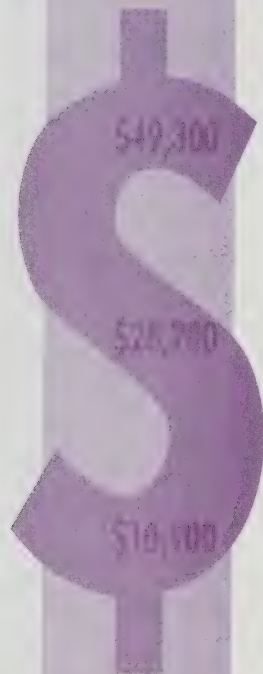
1995 to 2000





## Full-Time Earnings

1992



of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

# Computer Science

Trade/Vocational College (10 months)

## Program of Study

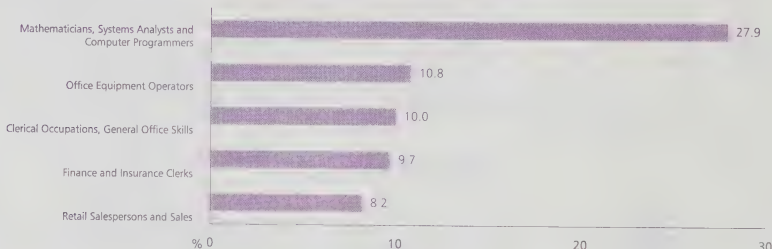
Students receive training in computer programming, systems design and analysis, computer technology and word processing.

- This program is offered in every province except Nova Scotia.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

THIS FIELD OF STUDY

ALL FIELDS OF STUDY

Would they make the same educational choice again?

77%

74%

Are they satisfied with their work?

94%

92%

Does their work directly match their training?

43%

47%

Do they feel overqualified for their work?

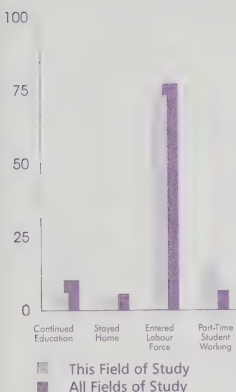
36%

36%



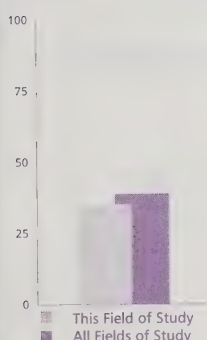
## Where Did They Go?

1992



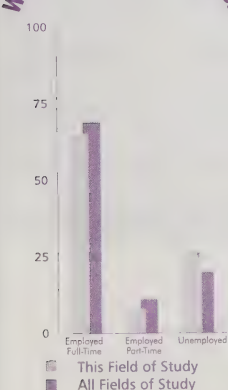
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 460 graduates received a diploma in computer science from a trade/vocational college and found jobs in a variety of occupations. Some are systems analysts, others are bookkeepers, and others operate electronic data processing or office equipment. Graduates work in many different areas and are often found in finance or retail sales. Information from various graduate surveys shows that:

- Two thirds of graduates found full-time employment, and less than one out of 10 found part-time employment; the unemployment rate for these graduates is above the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are higher than the average for other trade/vocational graduates and increase at an above average rate for the next three years.
- Women account for approximately 35% of graduates, compared with 40% about 10 years ago.
- These graduates often enter the same occupations as graduates from computer science fields of study at other levels, electrical/electronic engineering and commerce.
- The majority of those employed in computer science two years after graduation are in the same field three years later. However, many graduates employed as electronic data processing equipment operators and electronic equipment repairers find jobs in computer science three to five years after graduation.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average and rising unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to get better yet remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace.
- These graduates will have more difficulty when searching for employment as systems analysts than as computer operators and data entry clerks. These occupations are concentrated in the business services, professional services, and finance, insurance and real estate industries. These industries are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: T71. Related Codes: U73, C71. Vol. 1 Occupations Cross-index: 141, 142, 143, 216.

## Work Prospects

1995 to 2000





## Economics

Master's University (1 or 2 years)

### Program of Study

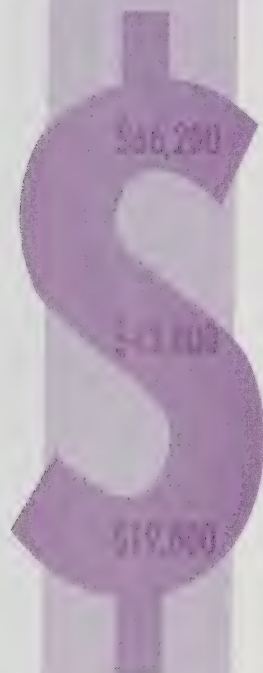
Students enrolled in this program study econometrics, labour and monetary economics, industrial organization, international trade theory, public finance and taxation.

- Economics is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in economics or a related discipline. An interview, a graduate admissions test and letters of recommendation are also required.

### Full-Time Earnings

1992

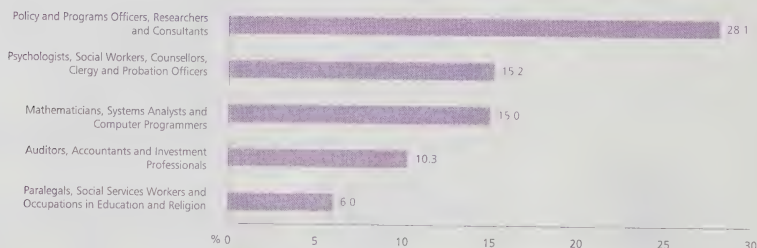


### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

### Occupations of Graduates

1992



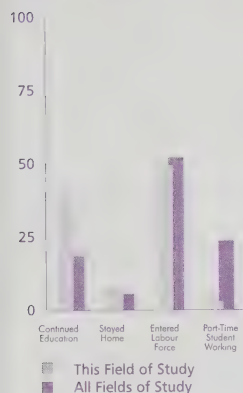
### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	80%	83%
Are they satisfied with their work?	94%	95%
Does their work directly match their training?	68%	69%
Do they feel overqualified for their work?	38%	57%

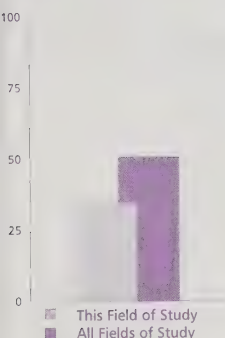
## Where Did They Go?

1992



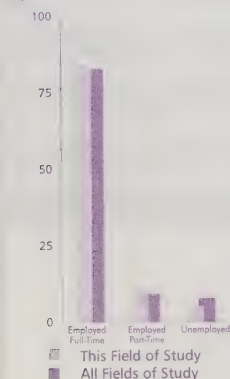
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 460 students received a master's degree in economics. Most found work in their field. Some are economists and others are in managerial or administrative occupations. Most are employed in federal or provincial administration. Information from various graduate surveys shows that:

- Six out of seven graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is lower than for other master's graduates.
- Two years after graduation, full-time earnings are somewhat below the average for other master's graduates but increase at nearly twice the average rate for the next three years.
- Women account for approximately 34% of graduates, compared with 24% about 10 years ago.
- These graduates often enter the same occupations as those with undergraduate degrees in economics, sociology or statistics.
- Few graduates change jobs. Most of those employed as economists or managers two years after graduation are in the same jobs three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are less than average and rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen but remain good.

- Job openings are expected to be less numerous than over the previous five-year period, and the number of people with the requisite skills for these jobs is expected to increase. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as policy and program officers than as administrative service and retail trade managers and professional investment analysts. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in government administration and the health and social services industries which are expected to exhibit weak growth over the remainder of the decade.

See also: This Field of Study Code: M81. Related Code: U81.  
Vol. 1 Occupations Cross-index: 011, 111, 112, 216, 416.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?



# Geography

Master's University (1 to 2 years)

## Program of Study

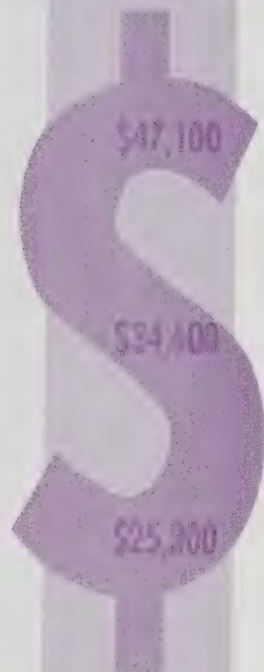
This program covers the study of cartography, terrain analysis, hydrology, geomorphology and environmental studies.

- Geography is offered at universities in every province except Prince Edward Island, Newfoundland, Nova Scotia and New Brunswick.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in geography or a related discipline. An interview, a graduate admissions test and letters of recommendation are also required.

## Full-Time Earnings

1992

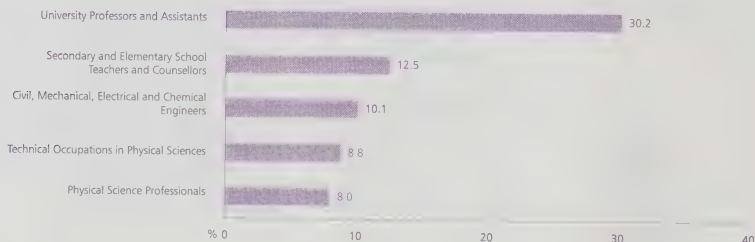


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

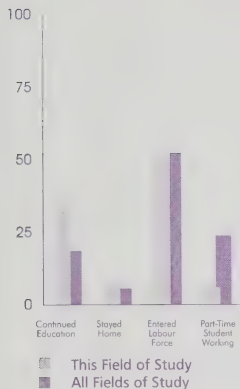
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	72%	83%
Are they satisfied with their work?	100%	95%
Does their work directly match their training?	50%	69%
Do they feel overqualified for their work?	70%	57%



## Where Did They Go?

1992



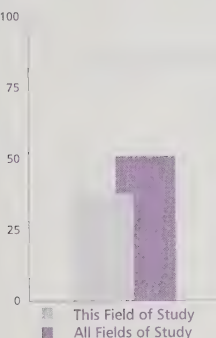
## After Graduation

In 1994, 190 students received a master's degree in geography. Most found work in teaching. Some are also employed in engineering or community planning disciplines. Graduates are usually employed in the field of education. Information from various graduate surveys shows that:

- Three out of four graduates found full-time employment, and more than one out of 10 found part-time employment; the unemployment rate for these graduates is higher than for other master's graduates.
- Two years after graduation, full-time earnings are far below the average for other master's graduates but increase somewhat faster than average for the next three years.
- Women account for approximately 38% of graduates, compared with 29% about 10 years ago.
- These graduates often enter the same occupations as university graduates from the teaching, geology, planning and resource management, and computer science fields of study.
- A large number of graduates change jobs. The majority of those in administration become community planners or computer analysts between the third and fifth years of their careers. Graduates employed as computer analysts often become administrators or teachers three to five years after graduation.

## Percentage of Women

1994



## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and remain poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as teachers than as physical sciences professionals. The poor labour market conditions for teaching occupations follow from the fact that they are concentrated in the education sector which is expected to exhibit below average growth over the remainder of the decade.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?

See also: This Field of Study Code: M82. Related Code: U82. Vol. 1 Occupations Cross-index: 211, 221, 412, 413, 414.





# Planning and Resource Management

Master's University (2 years)

## Program of Study

Students enrolled in this program study rural and urban planning, transportation systems planning, community development, environmental studies and resource management.

- This program is offered only in Alberta.
- Some universities offer a short program leading to a certificate or a graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in this or a related field. An interview, letters of recommendation and a graduate admissions test are also required.

## Full-Time Earnings

1992

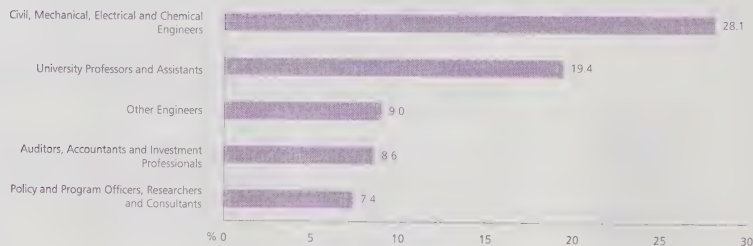


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



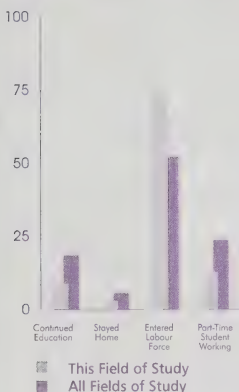
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	85%	83%
Are they satisfied with their work?	98%	95%
Does their work directly match their training?	74%	69%
Do they feel overqualified for their work?	46%	57%

## Where Did They Go?

1992



## After Graduation

In 1994, 510 students received a master's degree in planning and resource management. Most work as community planners, teachers or policy and program officers. Graduates are usually employed in the public service. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time work, and one out of 20 found part-time work; the unemployment rate for these graduates is lower than for other master's graduates.
- Two years after graduation, full-time earnings are somewhat below the average for other master's graduates but increase at one and a half times the average rate for the next three years.
- Women account for approximately 49% of graduates, compared with 27% about 10 years ago.
- These graduates often enter the same occupations as other university graduates with degrees in commerce, economics and civil engineering.
- A fairly significant number of graduates employed as planners become public servants, managers or administrators between the third and fifth years of their careers. The majority of graduates employed in managerial occupations become planners three to five years after graduation.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are about average but rising relative to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain good.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition amongst these graduates will be strong.
- These graduates will have more difficulty when searching for employment as university professors and assistants, and policy and program officers than in civil engineering or urban planning. The labour market conditions for these occupations follow from the fact that they are concentrated in the professional services and real estate industries which are expected to exhibit average growth over the remainder of the decade. The education and public administration industries are expected to exhibit weak growth.

See also: This Field of Study Code: M84. Related Code: U84.  
Vol. 1 Occupations Cross-index: 111, 213, 215, 412, 416.

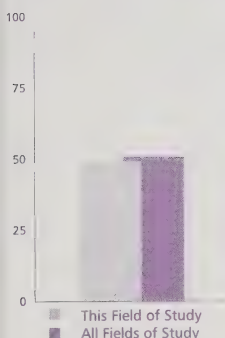
## Work Prospects

1995 to 2000



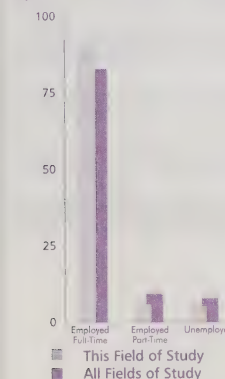
## Percentage of Women

1994



## Work Life of Recent Graduates

1992





# Political Science

Master's University (1 or 2 years)

## Program of Study

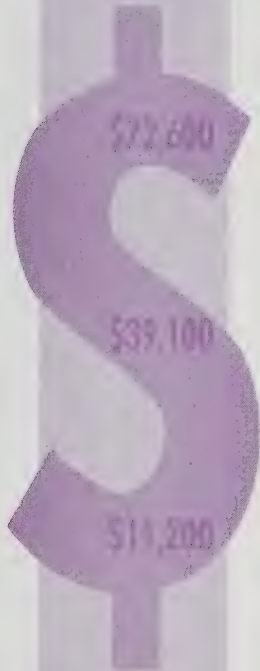
Students specialize in such fields as comparative politics, public administration, international relations or political theory.

- This program is offered at universities in every province except Prince Edward Island, Newfoundland and Nova Scotia.
- Some universities offer a short program leading to a certificate or a graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in political science or a related discipline. An interview, a graduate admissions test and letters of recommendation are also required.

## Full-Time Earnings

1992

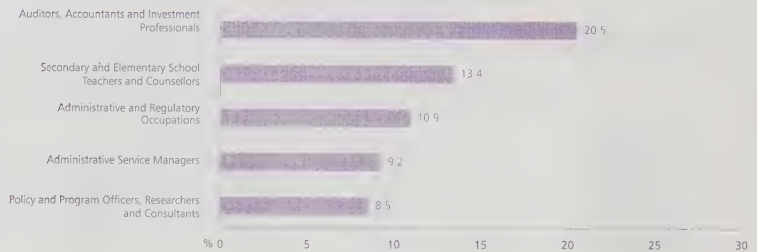


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

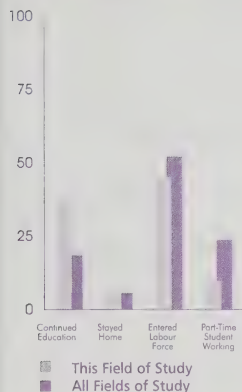
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	78%	83%
Are they satisfied with their work?	94%	95%
Does their work directly match their training?	49%	69%
Do they feel overqualified for their work?	76%	57%



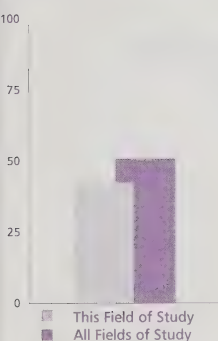
## Where Did They Go?

1992



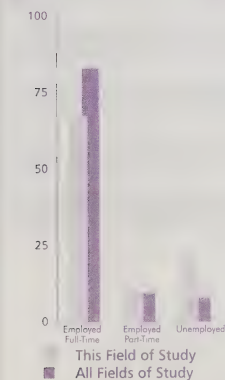
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 510 students received a master's degree in political science. Most graduates found work in management, administration or teaching. Graduates are usually employed in the federal or provincial public service. Information from various graduate surveys shows that:

- Two out of three graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is much higher than for other master's graduates.
- Two years after graduation, full-time earnings are well below the average for other master's graduates but increase at an above average rate for the next three years.
- Women account for approximately 42% of graduates, compared with 28% about 10 years ago.
- These graduates often enter the same occupations as other university graduates with degrees in commerce, economics and history.
- A large number of graduates change jobs. Many graduates employed as managers or policy and program officers become administrators between the third and fifth years after graduation. Three to five years after graduation, many employed as administrators enter management or teaching. The majority of those employed as teachers become managers or administrators between the third and fifth years of their careers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair to poor.

- Recent graduates from this field of study have had a much higher than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and yet remain fair to poor.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a faster pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as teachers and policy and program officers than as writers, editors, journalists and public relations professionals. The labour market conditions for the former occupations follow from the fact that they are concentrated in the education and public administration industries which are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: M85. Related Code: U85.  
Vol. 1 Occupations Cross-index: 011, 111, 412, 414, 416.

## Work Prospects

1995 to 2000

Getting  
Better

Stable

Getting  
Worse

For Graduates

How will  
labour market  
conditions  
change  
for these  
graduates?





# Psychology

Master's University (2 or 3 years)

## Program of Study

Students specialize in such areas as abnormal psychology, social psychology, clinical psychology, child behaviour or cognition and learning processes.

- This program is offered at universities in every province except Prince Edward Island and Newfoundland.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in psychology or a related discipline. An interview, a graduate admissions test and letters of recommendation are also required.

## Full-Time Earnings

1992

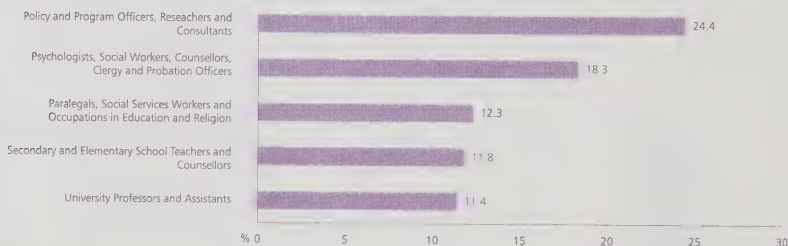


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



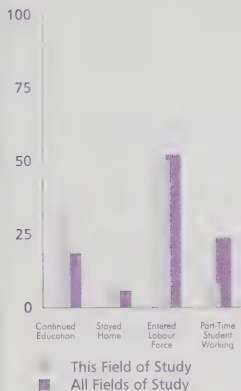
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	81%	83%
Are they satisfied with their work?	92%	95%
Does their work directly match their training?	65%	69%
Do they feel overqualified for their work?	40%	57%

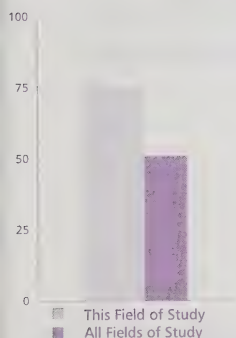
## Where Did They Go?

1992



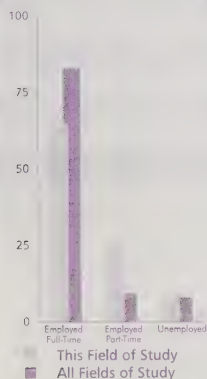
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 660 students received a master's degree in psychology and usually found employment in their field. Some are also in administrative occupations. Most graduates work in the social services or hospital industry. Information from various graduate surveys shows that:

- Two out of three graduates found full-time employment, and more than one out of four found part-time employment; the unemployment rate for these graduates is similar to that for other master's graduates.
- Two years after graduation, full-time earnings are well below the average for other master's graduates, but income growth is above average for the next three years.
- Women account for approximately 75% of graduates, compared with 59% about 10 years ago.
- These graduates often enter the same occupations as other university graduates with degrees in sociology, social work or social welfare.
- Job changing is rare among graduates employed as psychologists or counsellors two years after graduation. However, the majority of graduates employed as social workers change jobs between the third and fifth years of their careers, often finding work as psychologists.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to rise substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as teachers, counsellors and social service workers than as child care and home support workers and policy and program officers. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education and other health and social services industries which are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: M86. Related Code: U86.  
Vol. 1 Occupations Cross-index: 412, 413, 414, 415, 421.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?



# Social Work/Welfare

Master's University (1 or 2 years)

## Program of Study

This program includes such fields as alcohol and drug counselling, and family and marriage counselling.

- It is offered at universities in every province except Prince Edward Island, Ontario and Saskatchewan.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.

**Prerequisites:** Applicants must have an honours undergraduate degree in this field or a related discipline. An interview, letters of recommendation and a graduate admissions test are also required.

## Full-Time Earnings

1992

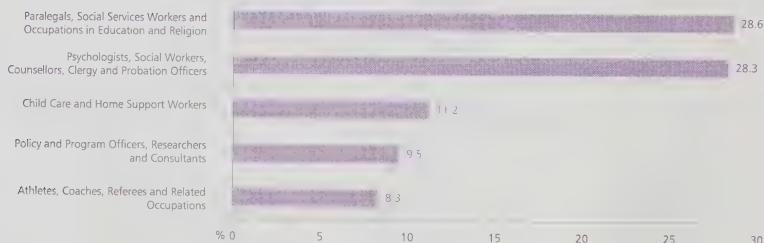


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

### THIS FIELD OF STUDY

### ALL FIELDS OF STUDY

Would they make the same educational choice again?

86%

83%

Are they satisfied with their work?

95%

95%

Does their work directly match their training?

87%

69%

Do they feel overqualified for their work?

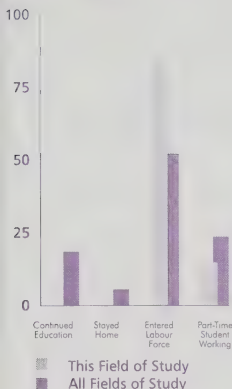
23%

57%



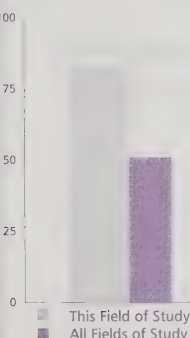
## Where Did They Go?

1992



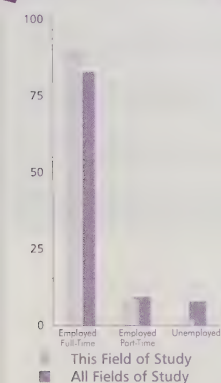
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 710 students received a master's degree in social work and social welfare. The majority found work in their field and are employed in the social services and hospitals. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time employment and nearly one out of 10 found part-time employment; the unemployment rate for these graduates is one quarter of the average for other master's graduates.
- Two years after graduation, full-time earnings are somewhat below the average for other master's graduates; income growth is greater than average over the next three years.
- Women account for approximately 83% of graduates, compared with 59% about 10 years ago.
- These graduates often work in the same occupations as university graduates in sociology and psychology.
- Not many graduates change jobs. The majority of graduates employed as social workers two years after graduation are in the same jobs three years later. Some have become administrators. Similarly, some graduates employed in administration two years after graduation have changed jobs three years later, often going back to social work. None of the graduates employed as teachers two years after graduation changed jobs by the five-year mark of their careers.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is good.

- Recent graduates from this field of study have had a much lower than average unemployment rate. Their earnings are about average but rising relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become fair.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to rise substantially. The competition among these graduates will be intense.
- These graduates will have more difficulty when searching for employment as social workers, social service workers, teachers and policy and program officers than as child care and home support workers and health service assistants. The labour market conditions for the former occupations follow from the fact that they are concentrated in the education, provincial government and other health and social services industries which are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: M88. Related Code: U88.  
Vol. 1 Occupations Cross-index: 031, 415, 416, 421.

## Work Prospects

1995 to 2000

Getting  
Better

Stable

Getting  
Worse

for Graduates

How will  
labour market  
conditions  
change  
for these  
graduates?





# Sociology

Master's University (1 or 2 years)

## Program of Study

This program covers such fields as social theory, the sociology of industry and work, social structures and criminology.

- Sociology is offered at universities in every province except Prince Edward Island and Newfoundland.
- Some universities offer a short program leading to a certificate or graduate diploma rather than a master's degree. Admission requirements are the same.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have an honours undergraduate degree in sociology or the equivalent. An interview, a graduate admissions test and letters of recommendation are also required.

## Full-Time Earnings

1992



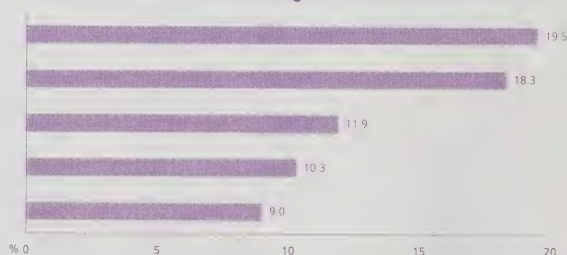
of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$45,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992

Paralegals, Social Services Workers and Occupations in Education and Religion  
Psychologists, Social Workers, Counsellors, Clergy and Probation Officers  
University Professors and Assistants  
Secondary and Elementary School Teachers and Counsellors  
Policy and Program Officers, Researchers and Consultants



## Graduates Speak Out

1992

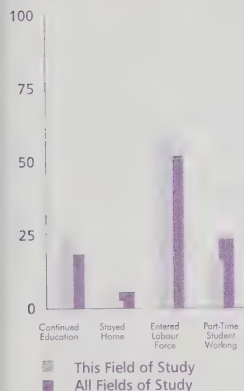
### HOW MANY SAID YES

THIS FIELD OF STUDY ALL FIELDS OF STUDY

Would they make the same educational choice again?	65%	83%
Are they satisfied with their work?	94%	95%
Does their work directly match their training?	67%	69%
Do they feel overqualified for their work?	54%	57%

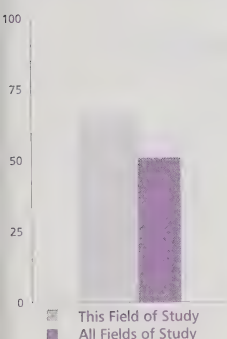
## Where Did They Go?

1992



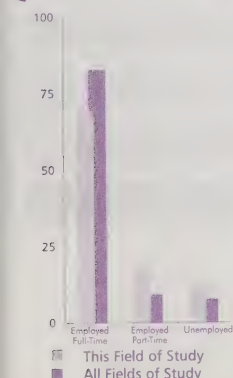
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 300 students received a master's degree in sociology and most found work in their field. Some are also employed as administrators or teachers. Graduates usually work in the federal or provincial public service. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and less than one out of five found part-time employment; the unemployment rate for these graduates is much higher than for other master's graduates.
- Two years after graduation, full-time earnings are much lower than for other master's graduates and increase at half the average rate over the next three years.
- Women account for approximately 65% of graduates, compared with 51% about 10 years ago.
- These graduates often enter the same occupations as other university graduates with degrees in social work/welfare, psychology, economics and commerce.
- The majority of those employed as social workers two years after graduation are in the same jobs three years later. Even fewer of the graduates employed as elementary or secondary school teachers two years after graduation changed jobs.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair to poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to rise substantially. The competition among these graduates will be intense.
- These graduates will have more difficulty when searching for employment as social service workers, social workers, teachers or program and policy officers than as writers, journalists, public relations professionals, and child care and home support workers. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education and other health and social services industries which are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: M89. Related Code: U89.  
Vol. 1 Occupations Cross-index: 412, 414, 415, 416, 421.

## Work Prospects

1995 to 2000



How will  
labour market  
conditions  
change  
for these  
graduates?

## Economics

### Undergraduate University (3 years)

#### Program of Study

This program includes the study of business and agricultural economics, econometrics, consumer and labour economics, international trade, banking and monetary economics.

- Economics programs are offered at universities in most provinces except Prince Edward Island and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics and English (French). Quebec students must have a Diploma of Collegial Studies.

#### Full-Time Earnings

1992

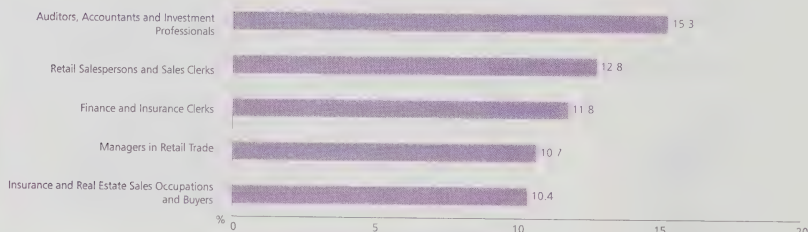


#### of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

#### Occupations of Graduates

1992



#### Graduates Speak Out

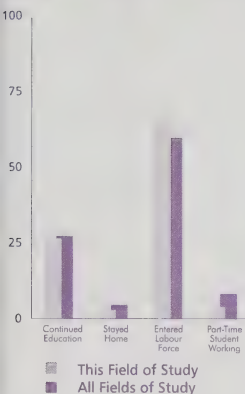
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	55%	71%
Are they satisfied with their work?	86%	91%
Does their work directly match their training?	24%	57%
Do they feel overqualified for their work?	42%	28%



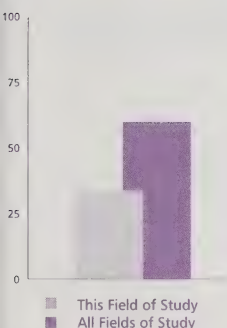
## Where Did They Go?

1992



## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 4,750 students graduated in economics. Graduates who are employed full-time found work in a wide variety of fields. Many enter management or administration, but most find employment in finance and trade. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and less than one out of 10 found part-time employment. The unemployment rate for economics graduates is higher than for other graduates at this level.
- Two years after graduation, full-time earnings are about the same as for other graduates at this level; but, two to five years after graduation, income growth is half the average rate.
- Women account for about 32% of graduates, compared with 28% about 10 years ago.
- University graduates in commerce often find work in the same occupations as these graduates.
- There is relatively little job changing among these graduates — nearly all those who are in management two years after graduation are still in that field three years later. Some have moved on to positions as economists. Graduates working in management or administration are more mobile. Five years after graduation, many are working as analysts or teachers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair to poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their earnings are average but declining relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While job openings are expected to be as numerous as they were over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition among these graduates will be about the same as in the recent past.
- These graduates will have more difficulty when searching for employment as investment professionals, policy and program officers and managers than as finance officers and administrators. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in the finance, insurance and real estate, wholesale trade and professional services industries. These industries are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: U81. Related Code: M81.  
Vol. 1 Occupations Cross-index: 011, 111, 122, 123, 416.

## Work Prospects

1995 to 2000







# Geography

Undergraduate University (3 or 4 years)

## Program of Study

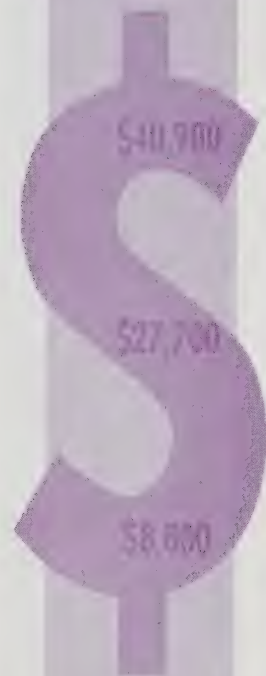
Students enrolled in geography study biogeography, cultural and historical geography, environmental geography and physical geography.

- This program is offered at universities in most provinces except Prince Edward Island, Nova Scotia and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed high school with high marks in mathematics and English (French). Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992

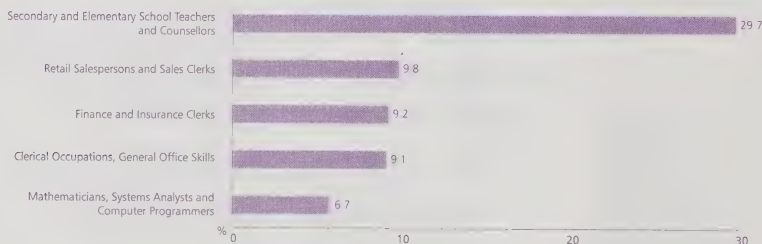


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



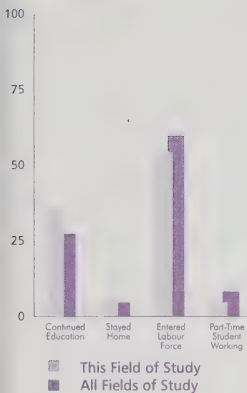
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	64%	71%
Are they satisfied with their work?	82%	91%
Does their work directly match their training?	34%	57%
Do they feel overqualified for their work?	43%	28%

## Where Did They Go?

1992



## After Graduation

In 1994, 2,530 students graduated in geography and found work in a wide variety of areas. Some found positions in the sales or financial occupations, but most are employed in the educational system as teachers. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and one out of five found part-time employment. The unemployment rate for geography graduates is higher than for other graduates at this level.
- Two years after graduation, full-time earnings are significantly lower than the average for other graduates at this level; and, between two and five years after graduation, income growth is below average.
- Women account for approximately 42% of graduates, compared with 36% about 10 years ago.
- University and community college graduates in education, commerce and economics often find work in the same occupations as these graduates.
- Graduates who enter teaching do not tend to change jobs; five years after graduation, only a few have moved on to new positions as community service workers. Many geography graduates working in clerical positions change jobs between the third and fifth years of their careers.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their relative earnings are declining and low compared to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers than as investment professionals, retail salespersons and finance and insurance clerks. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in the retail trade, investment and finance industries. These industries are expected to exhibit above average growth over the remainder of the decade.

See also: This Field of Study Code: U82. Related Code: M82.  
Vol. 1 Occupations Cross-index: 111, 414.

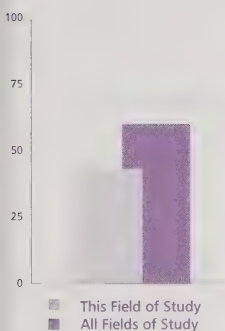
## Work Prospects

1995 to 2000



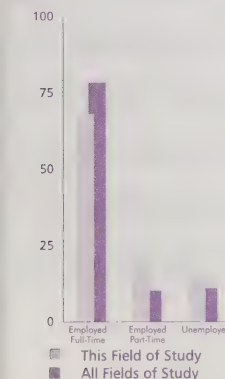
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## Full-Time Earnings

1992



## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

# Law

## Undergraduate University (3 or 4 years)

### Program of Study

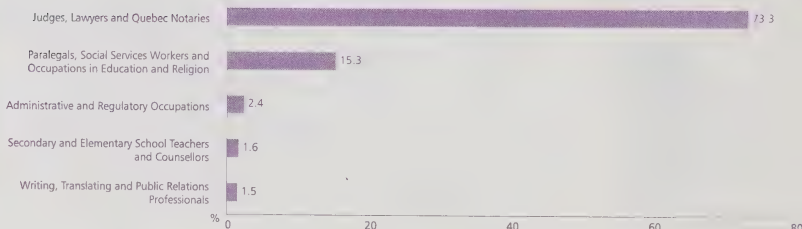
This program covers the study of criminal, business, tax, banking and labour law, and civil liberties.

- Law programs are offered at major universities in all provinces except Prince Edward Island and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.
- Before being able to practise law, graduates must article for at least a year (six months in Quebec), complete a bar admission course (usually six months, eight in Quebec) and pass the bar exam.

**Prerequisites:** Applicants must have completed secondary school with high marks in the humanities, social sciences and English (French). Quebec students must have a Diploma of Collegial Studies. Students must also have completed two years of university with above-average marks. Admission is based on an interview, letters of recommendation and an admission test.

## Occupations of Graduates

1992



## Graduates Speak Out

1992

### HOW MANY SAID YES

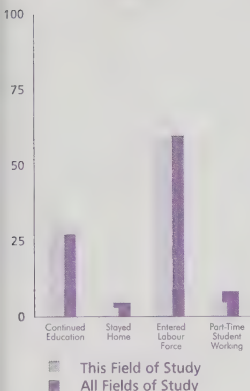
THIS FIELD OF STUDY ALL FIELDS OF STUDY

Would they make the same educational choice again?	79%	71%
Are they satisfied with their work?	96%	91%
Does their work directly match their training?	66%	57%
Do they feel overqualified for their work?	19%	28%



## Where Did They Go?

1992



## After Graduation

In 1994, 3,830 students graduated in law and most found work in their field. Law graduates are usually employed in the professional services industry. Information from various graduate surveys shows that:

- More than four out of five graduates found full-time work, and one out of 20 found part-time employment. The unemployment rate for law graduates is somewhat higher than for other graduates at this level.
- Two years after graduation, full-time earnings are significantly higher than the average for other graduates at this level and, between two and five years after graduation, increase at twice the average rate.
- Women account for approximately 52% of graduates, compared with 38% about 10 years ago.
- Given their high degree of specialization, law graduates do not face job competition from graduates in other fields.
- Very few law graduates change jobs; the majority of those who are practising law two years after graduation are still practising three years later. Some move on to positions in management or the public service.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

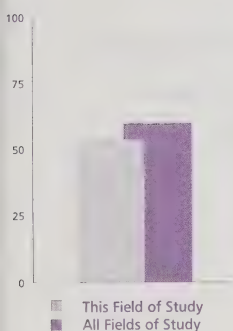
- Recent graduates from this field of study have had a higher than average unemployment rate. Their relative earnings are rising and high compared to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase dramatically. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as lawyers, Quebec notaries and paralegals than as writers, journalists and public relations professionals. The poor labour market conditions for these occupations follow from the fact that there is an excess supply of graduates.

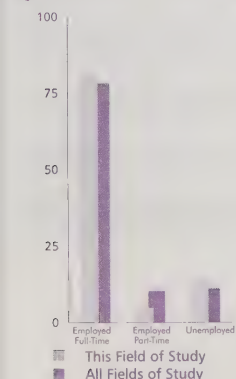
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



See also: This Field of Study Code: U83.  
Vol. 1 Occupations Cross-index: 411, 421.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?





# Planning and Resource Management

Undergraduate University (3 years)

## Program of Study

This program covers environmental theory, resource development, urban economics, transportation planning, and urban and rural design and planning.

- This program is offered at major universities in Nova Scotia, Quebec, Ontario and Alberta.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics and English (French). Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992

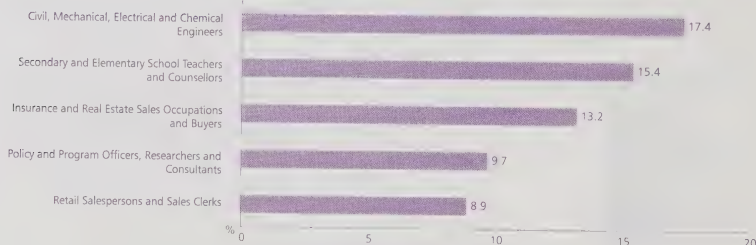


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



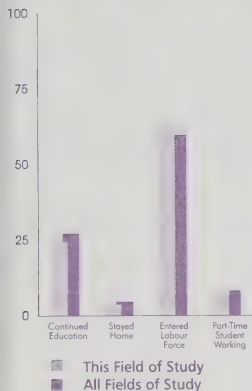
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	72%	71%
Are they satisfied with their work?	92%	91%
Does their work directly match their training?	46%	57%
Do they feel overqualified for their work?	31%	28%

## Where Did They Go?

1992



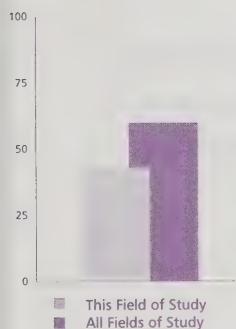
## After Graduation

In 1994, 900 students graduated in planning and resource management and worked in a wide variety of fields. Some found jobs with architectural or engineering firms, and others entered teaching and sales. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 20 found part-time employment. The unemployment rate for these graduates is considerably higher than for other graduates at this level.
- Two years after graduation, full-time earnings are close to the average for other graduates at this level and, between two and five years after graduation, increase at about the same rate.
- Women account for approximately 42% of graduates, compared with 35% about 10 years ago.
- These graduates generally work with engineering graduates in architectural or engineering firms. Those who enter sales work with commerce graduates.
- A large number of planning and resource management graduates change jobs; the majority of graduates working for architectural or engineering firms change jobs between the third and fifth years of their careers. Some move on to work in property management services.

## Percentage of Women

1994



## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their relative earnings are rising but below the average earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to remain fair.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at about the same pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and policy and program officers than in civil engineering and as real estate salespersons. The stable labour market conditions for the latter occupations follow from the fact that they are concentrated in the professional services, retail trade and insurance industries which are expected to exhibit average growth over the remainder of the decade.

## Work Prospects

1995 to 2000



See also: This Field of Study Code: U84. Related Code: M84.  
Vol. 1 Occupations Cross-index: 122, 213, 414, 416, 623.

# Political Science

Undergraduate University (3 years)

## Program of Study

Students enrolled in this program study power, conflict and conflict resolution, political theory and methodology, comparative politics, international relations, interest groups, government structures and legal systems.

- Political science programs are offered at universities in most provinces except Prince Edward Island and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with high marks in social sciences and English (French). Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992



## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,500 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

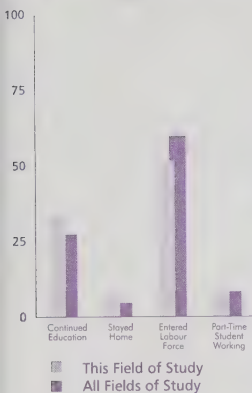
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	60%	71%
Are they satisfied with their work?	88%	91%
Does their work directly match their training?	18%	57%
Do they feel overqualified for their work?	47%	28%



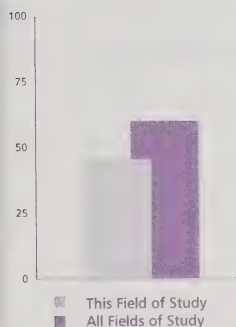
## Where Did They Go?

1992



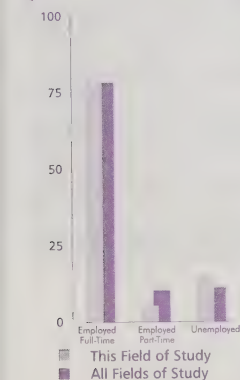
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 4,570 students graduated in political science and found work in a range of fields. In most cases, they are employed as writers and clerks, or in administrative and legal services in the federal or provincial public service. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 20 found part-time employment. The unemployment rate for political science graduates is higher than for other graduates at this level.
- Two years after graduation, full-time earnings are below the average for other graduates at this level; and, between two and five years after graduation, income growth is only half the average rate.
- Women account for approximately 44% of graduates, compared with 38% about 10 years ago.
- Graduates working in management or administrative positions usually work with commerce graduates.
- A large number of graduates change jobs; many employed as administrators two years after graduation have changed jobs three years later. Some find work as senior managers, civil servants or office assistants, or in legal services. Similarly, all graduates employed as office assistants two years after graduation have changed jobs by the fifth year of their careers, moving on to positions in legal services or administration, or as specialists in social sciences.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a higher than average unemployment rate. Their relative earnings are declining and below the average earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen but remain poor.

- While job openings are expected to be as numerous as they were over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase slightly. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment as policy and program officers, administrators and investment professionals than as writers, editors, journalists and public relations professionals. The labour market conditions for the latter occupations follow from the fact that they are concentrated in the professional and government service industries. These industries are expected to exhibit weak to average growth over the remainder of the decade.

See also: This Field of Study Code: U85. Related Code: M85. Vol. 1 Occupations Cross-index: 111, 122, 512.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?



# Psychology

Undergraduate University (3 or 4 years)

## Program of Study

Students enrolled in this program learn about human behaviour, particularly people's reaction to stress and pressure, through the study of social psychology, personality, learning, drugs and addiction, criminal behaviour and child development.

- Psychology programs are offered at universities in most provinces except Prince Edward Island and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.
- Some universities offer a short program leading to a certificate or diploma rather than a bachelor's degree.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics and English (French). Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992



## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



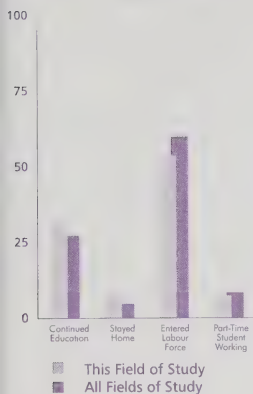
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	59%	71%
Are they satisfied with their work?	85%	91%
Does their work directly match their training?	45%	57%
Do they feel overqualified for their work?	43%	28%

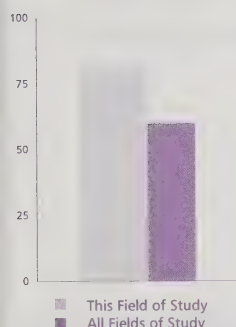
## Where Did They Go?

1992



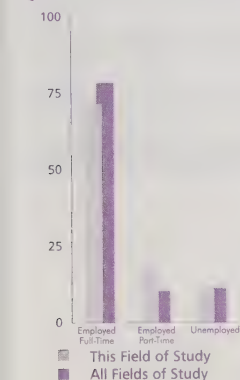
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 8,070 students graduated in psychology. They found work in a wide variety of fields but most are employed in education and social services, usually as teachers, psychologists and social workers. Information from various graduate surveys shows that:

- Seven out of 10 graduates found full-time employment, and one out of five found part-time employment; the unemployment rate for psychology graduates is similar to that for other graduates at this level.
- Two years after graduation, full-time earnings are somewhat lower than the average for other graduates at this level; but, between two and five years after graduation, they increase at one and a half times the average rate.
- Women represent 78% of graduates, compared with 73% about 10 years ago.
- These graduates generally find work in the same occupations as psychology graduates with a master's degree.
- Few graduates employed in teaching two years after graduation change jobs; five years into their careers, some have taken positions as managers, administrators or psychologists. Those employed as social workers are much more likely to change jobs. Five years after graduation, half of them have found positions as guidance counsellors or educators, or in the health care services.

## Work Prospects

- Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.
- Recent graduates from this field of study have had an average unemployment rate. Their relative earnings are rising but are below the average earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to rise substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as secondary and elementary school teachers and social service workers than as child care and home support workers and policy and program officers. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education and other health and social services industries. These industries are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: U86. Related Code: M86. Vol. 1 Occupations Cross-index: 414, 415, 421, 647.

## Work Prospects

1995 to 2000





# Social Work/Welfare

Undergraduate University (3 or 4 years)

## Program of Study

Students entering this field are trained to help people resolve conflicts and problems in their social or personal lives.

- This program is offered at universities in most provinces except Prince Edward Island and Saskatchewan.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have a high school diploma (Diploma of Collegial Studies in Quebec) with high marks overall.

## Full-Time Earnings

1992

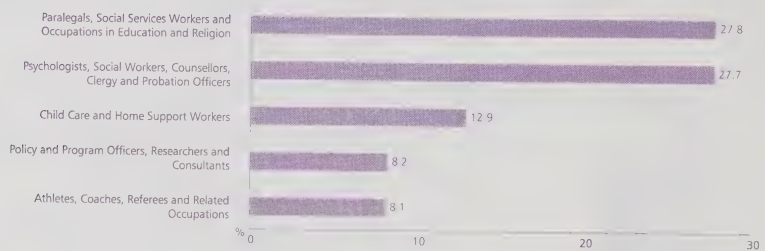


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

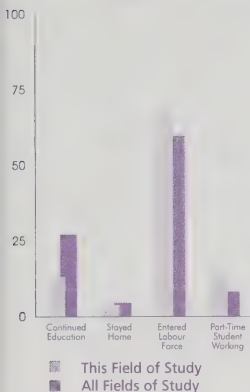
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	84%	71%
Are they satisfied with their work?	94%	91%
Does their work directly match their training?	82%	57%
Do they feel overqualified for their work?	11%	28%



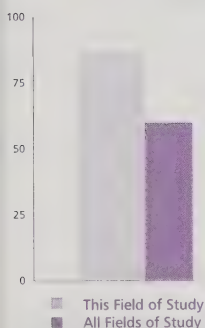
## Where Did They Go?

1992



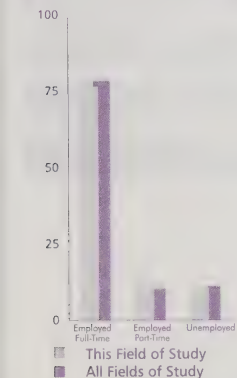
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,900 students graduated in social work or social services. The majority of graduates found work in the social services industry. Information from various graduate surveys shows that:

- Three out of four graduates found full-time employment, and more than one out of 10 found part-time employment. The unemployment rate for graduates is close to that for other graduates at this level.
- Two years after graduation, full-time earnings are slightly higher than the average for other graduates at this level and, between two and five years after graduation, increase at about the average rate.
- Women account for approximately 85% of graduates, compared with 78% about 10 years ago.
- Graduates usually find work in the same occupations as sociology and psychology graduates.
- Few social work and social services graduates change jobs; the majority of those employed as social workers two years after graduation are in the same line of work three years later. Graduates who found work as counsellors, although fewer in number, are much more inclined to change jobs. Five years after graduation, almost all have moved on to other positions, often in social work.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average but rising unemployment rate. Their relative earnings are rising and are slightly higher than the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While job openings are expected to be slightly less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase substantially. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates will have more difficulty when searching for employment as social workers, social service workers and administrators than as child care and home support workers. The labour market conditions for the former occupations follow from the fact that they are concentrated in the provincial government and health and social service sectors which are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: U88. Related Code: M88.  
Vol. 1 Occupations Cross-index: 414, 415, 416, 421.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?





# Sociology

Undergraduate University (3 or 4 years)

## Program of Study

This field of study includes ethnic group relations, social psychology, the family and marriage, population studies, criminology, and religions and society.

- Sociology programs are offered at universities in most provinces except Prince Edward Island and Newfoundland.
- Some universities offer this degree through a co-op program, which combines work and study.

**Prerequisites:** Applicants must have completed secondary school with high marks in mathematics, the humanities and social sciences. Quebec students must have a Diploma of Collegial Studies.

## Full-Time Earnings

1992

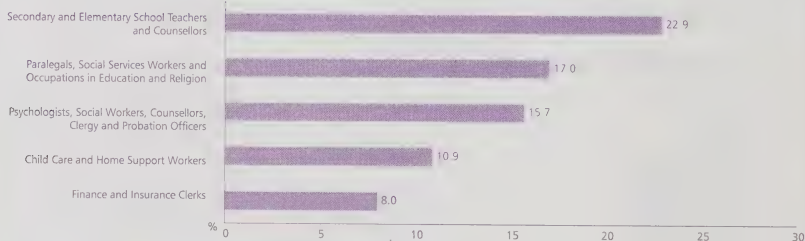


## Of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$32,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



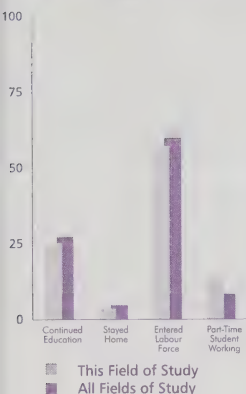
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	58%	71%
Are they satisfied with their work?	92%	91%
Does their work directly match their training?	47%	57%
Do they feel overqualified for their work?	41%	28%

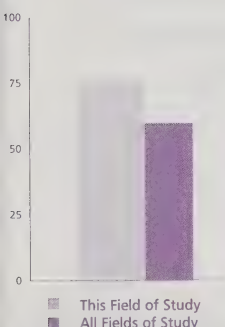
## Where Did They Go?

1992



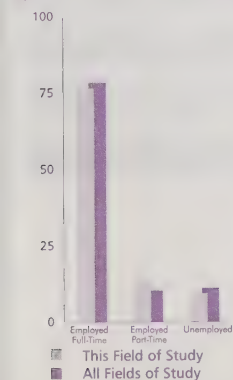
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 4,950 students graduated in sociology and found employment in several fields. In most cases, they became social workers, although some became policy and program officers and teachers. The majority found work in the social services sector. Information from various graduate surveys shows that:

- Three out of four graduates found full-time employment, and one out of seven found part-time employment. The unemployment rate for sociology graduates is slightly lower than for other graduates at this level.
- Two years after graduation, full-time earnings are lower than the average for other graduates at this level; and, between two and five years after graduation, income growth is much slower than average.
- Women account for approximately 73% of graduates, compared with 63% about 10 years ago.
- Sociology graduates generally enter the same occupations as those with a master's degree in sociology or social work.
- Few graduates who enter teaching change jobs; tendency is much higher among graduates working as policy and program officers or social workers two years after graduation. By the fifth year of their careers, the majority of administrators have become counsellors or senior managers, and the social workers have moved on to positions in senior management or teaching.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their relative earnings are declining and below the average of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While job openings are expected to be slightly more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to rise substantially. The competition among these graduates will be strong.
- These graduates will have more difficulty when searching for employment as teachers, social service workers and social workers than as child care and home support workers and policy and program officers. The poor labour market conditions for the former occupations follow from the fact that they are concentrated in the education and other health and social services industries. These industries are expected to exhibit below average growth over the remainder of the decade.

See also: This Field of Study Code: U89. Related Code: M89  
Vol. 1 Occupations Cross-index: 414, 415, 416, 421, 647.

## Work Prospects

1995 to 2000

Getting  
Better

Stable

Getting  
Worse

For Graduates

How will  
labour market  
conditions  
change  
for these  
graduates?



# Protection and Correction Services

Career Program, Community College (2 years)

## Program of Study

Students receive training in policing techniques, security and protection technologies, penal correction technologies, para-legal technologies and legal assistance.

- This program is offered at community colleges in every province except Newfoundland, New Brunswick and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma with courses in mathematics and English (French) and have relevant work experience. Most institutions require applicants to undergo a medical examination, a mathematics diagnostic test and an interview, and provide letters of recommendation.

## Full-Time Earnings

1992

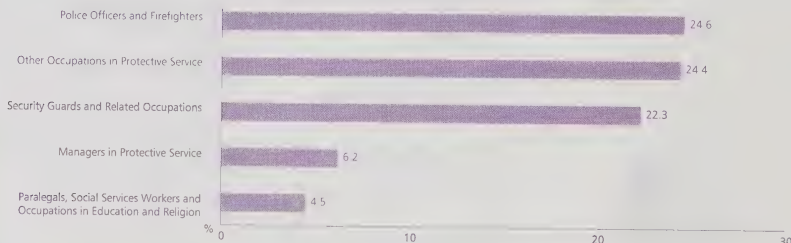


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

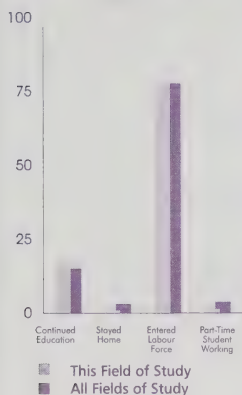
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	75%	74%
Are they satisfied with their work?	93%	93%
Does their work directly match their training?	47%	61%
Do they feel overqualified for their work?	52%	34%



## Where Did They Go?

1992



## After Graduation

In 1994, 3,070 students graduated in protection and correction services. The majority are employed in public safety as police officers, firefighters or security guards and are therefore municipal or provincial public servants. Information from various graduate surveys shows that:

- Nine out of 10 graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for these graduates is very low.
- Two years after graduation, full-time earnings are higher than the average for other community college graduates and, between two and five years after graduation, increase at one and a half times the average rate.
- Women account for approximately 38% of graduates, compared with 35% about 10 years ago.
- These graduates often enter the same occupations as university graduates with a degree in sociology (criminology).
- Few graduates change jobs. The majority of those working in public safety two years after graduation are in the same jobs three years later, although some have gone into social work.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

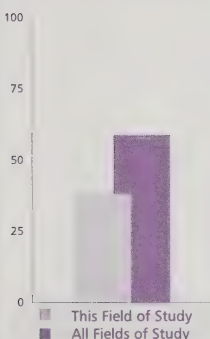
- Recent graduates from this field of study have had a falling and below average unemployment rate. Their earnings are high and stable relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While new job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to continue to grow slowly. The competition between these graduates and more experienced, but non-employed, workers will be intense.
- These graduates enter a variety of different occupations. The worsening labour market situation follows from the fact that these occupations are concentrated in protection and correction services. These areas are largely controlled by governments which are expected to exhibit weak employment growth over the remainder of the decade.

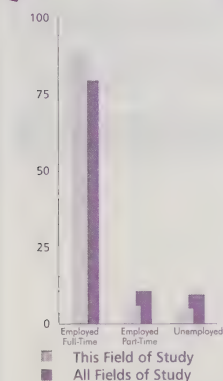
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



See also: This Field of Study Code: C81.  
Vol. 1 Occupations Cross-index: 421, 626, 665.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?





# Service Industries Technologies

Career Program, Community College (2 years)

## Program of Study

Students receive training in baking, cooking, serving food, home economics, laundry and dry cleaning, hospitality, tourism and funeral directing.

- This program is offered at community colleges in every province except Newfoundland, New Brunswick and Manitoba.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have some work experience and a high school diploma with courses in mathematics, English (French) and, in some cases, chemistry. An interview and medical examination are also required.

## Full-Time Earnings

1992

\$55,100

\$24,920

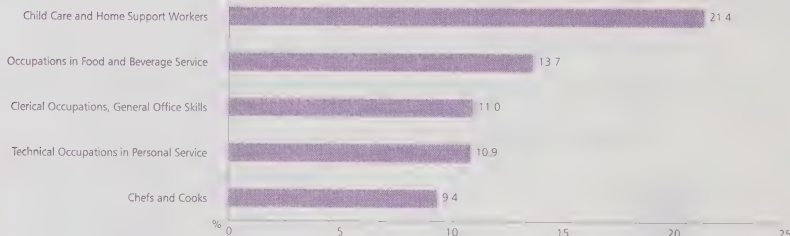
\$10,100

of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



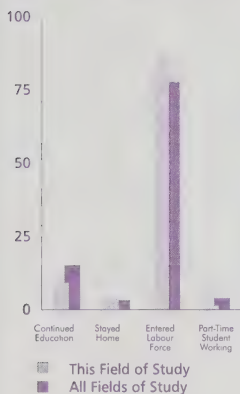
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	71%	74%
Are they satisfied with their work?	96%	93%
Does their work directly match their training?	43%	61%
Do they feel overqualified for their work?	42%	34%

## Where Did They Go?

1992



## After Graduation

In 1994, 520 students graduated in service industries technologies. Many graduates work as funeral directors, child care and home support workers, food and beverage servers, chefs and cooks. Information from various graduate surveys shows that:

- More than four out of five graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is lower than for other community college graduates.
- Two years after graduation, full-time earnings are slightly lower than the average for other community college graduates and, between two and five years after graduation, increase very slowly.
- Women account for approximately 63% of graduates, compared to 61% about 10 years ago.
- Graduates employed in funeral directing face little job competition; those in food services work with graduates from institutional management, and management and administration programs; graduates attempting to enter child care work with graduates from education and counselling and social services.
- A large number of graduates change jobs. A very high proportion of the graduates working in food and beverage service two years after graduation were managers or administrators three years later. Most graduates in child care and home support occupations two years after graduation were still there three years later.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a rising but below average unemployment rate. Their earnings are declining and low relative to the earnings of other graduates at the same level of studies. A significantly lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain only fair.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition among these graduates will be average.
- Graduates will have more success when searching for employment as chefs, cooks and food and beverage servers than as child care and home support workers. These occupations are concentrated in the personal and household services and accommodation and food services industries which are expected to exhibit strong growth over the remainder of the decade.

**See also:** This Field of Study Code: C82. Related Codes: U65, T81, T82, T83. Vol. 1 Occupations Cross-index: 623, 624, 627, 645, 647.

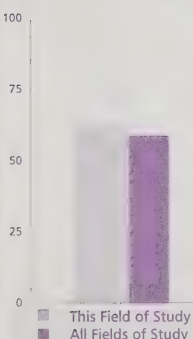
## Work Prospects

1995 to 2000



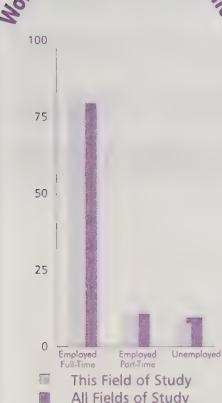
## Percentage of Women

1994



## Work Life of Recent Graduates

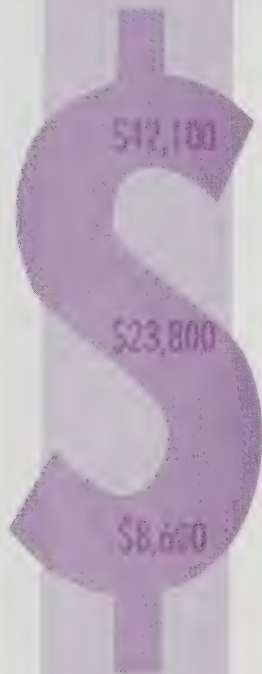
1992





## Full-Time Earnings

1992



of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

# Social Services

## Career Program, Community College (2 years)

### Program of Study

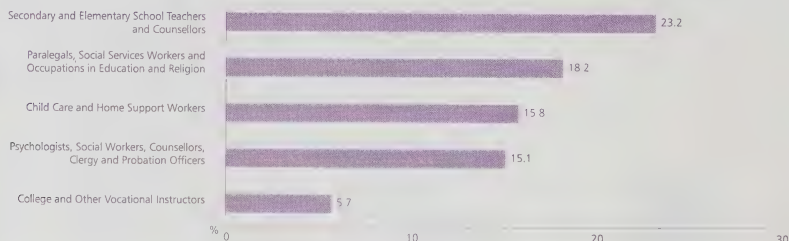
Students enrolled in this program study child care, youth services, gerontology, care for disabled people and domestic science.

- This program is offered at community colleges in every province except New Brunswick.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and relevant work experience. Applicants must often pass an interview and provide letters of recommendation.

### Occupations of Graduates

1992



### Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	76%	74%
Are they satisfied with their work?	95%	93%
Does their work directly match their training?	71%	61%
Do they feel overqualified for their work?	22%	34%



## After Graduation

In 1994, 2,750 students received a college diploma in social services. Most graduates find work in their field. Some become social service workers and child care and home support workers. Graduates work primarily in the social services sector. Information from various graduate surveys shows that:

- Almost three quarters of graduates found full-time employment, and one out of seven found part-time employment; the unemployment rate for graduates is slightly higher than for other community college graduates.
- Two years after graduation, full-time earnings are lower than the average for other community college graduates; between two and five years after graduation, income growth is slightly less than average.
- Women account for approximately 87% of graduates, about the same percentage as about 10 years ago.
- Graduates employed as social workers sometimes work with graduates from education and counselling programs or, in some cases, from protection and correction services programs.
- Few graduates change jobs. The majority of those employed as social service workers two years after graduation are in the same jobs three years later. Some take jobs in nursing, teaching or administration.

## Work Prospects

Despite weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a rising and above average unemployment rate. Their earnings are lower than average but stable relative to the earnings of other graduates at the same level of studies. A higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

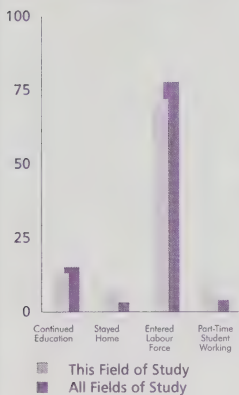
Over the next five years, the labour market situation for these graduates is expected to worsen and become poor.

- While new job openings are expected to be less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to continue to grow slowly. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more success when searching for employment in the health or personal services industries than as teachers or social service workers. The worsening labour market conditions follow from the fact that these occupations are concentrated in the government sector of the economy which is expected to exhibit weak employment growth over the remainder of the decade.

**See also:** This Field of Study Code: C84. Related Codes: U88, T85. Vol. 1 Occupations Cross-index: 414, 415, 421, 647.

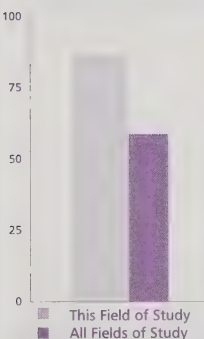
### Where Did They Go?

1992



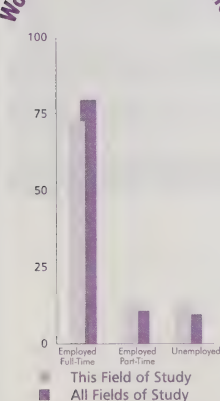
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?





# Sports and Recreation

Career Program, Community College (2 years)

## Program of Study

Students enrolled in this program receive training as physical education instructors, travel agents/counsellors, ticket agents, and wildlife and park officers.

- Sports and recreation programs are offered at community colleges in every province except Prince Edward Island, New Brunswick, Manitoba and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the institution and the program. In general, students must have a high school diploma and a good command of English (French). They must also pass an English (French) proficiency test, have related work experience and, in some cases, undergo a medical examination and an interview.

## Full-Time Earnings

1992

\$38,700

\$26,700

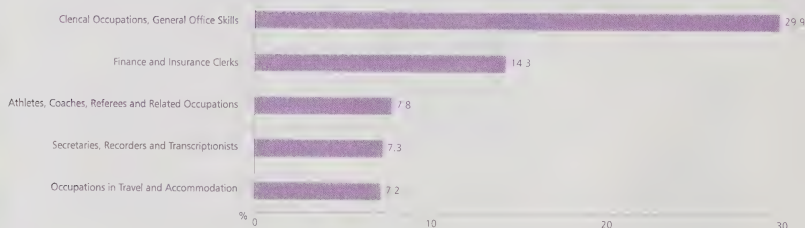
\$9,400

of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$26,700 is the average for all fields of study at this level.

## Occupations of Graduates

1992



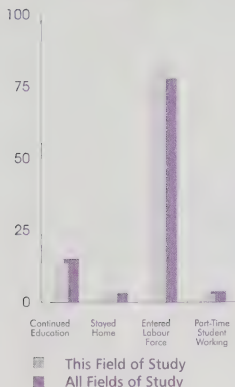
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	61%	74%
Are they satisfied with their work?	91%	93%
Does their work directly match their training?	52%	61%
Do they feel overqualified for their work?	40%	34%

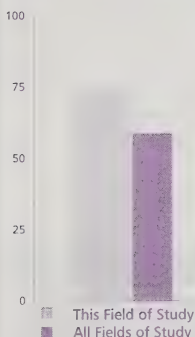
## Where Did They Go?

1992



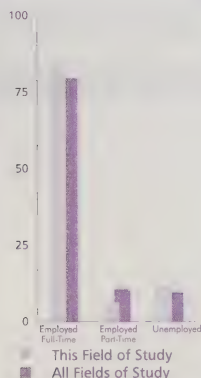
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 1,880 students received a diploma in sports and recreation. They usually found work as athletes, coaches and referees and in travel and accommodation. Graduates work in the amusement, recreation and air transportation industries. Information from various graduate surveys shows that:

- Four out of five graduates found full-time employment, and one out of 20 found part-time employment; the unemployment rate for graduates is higher than that of other community college graduates.
- Two years after graduation, full-time earnings are lower than the average for other community college graduates; between two and five years after graduation, income growth is one and a half times above the average rate.
- Women account for approximately 73% of graduates, compared with 77% about 10 years ago.
- These graduates often enter the same occupations as graduates from management and administration, social services and protection and correction.
- Few graduates change jobs. Many of those working in travel and accommodation two years after graduation are in the same positions three years later. Those who changed jobs usually became managers or administrators. Mobility is higher among those graduates working in social and community services. Five years after graduation, half of them have become managers or administrators.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a rising and above average unemployment rate. Their earnings are lower than average and declining relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen but remain poor.

- While new job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a faster pace. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more success when searching for employment as community service workers, athletes, coaches and referees than as child care or home support workers. The amusement and recreation sector is expected to provide more opportunities than the weaker education and government sectors over the remainder of the decade.

See also: This Field of Study Code: C85. Related Code: U23. Vol. 1 Occupations Cross-index: 421, 525, 643.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

For Graduates

How will labour market conditions change for these graduates?



# Cooking

Trade/Vocational College (6 months)

## Program of Study

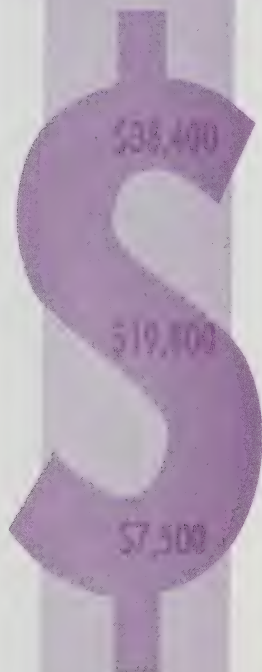
Students receive training as chefs or cooks.

- This program is offered in every province.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

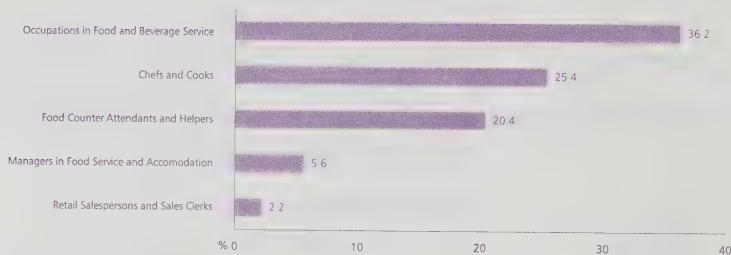


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



## Graduates Speak Out

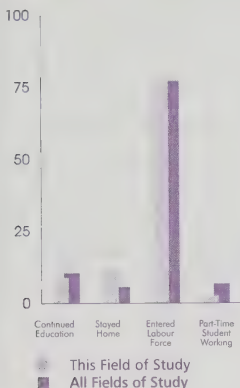
1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	70%	74%
Are they satisfied with their work?	94%	92%
Does their work directly match their training?	40%	47%
Do they feel overqualified for their work?	40%	36%



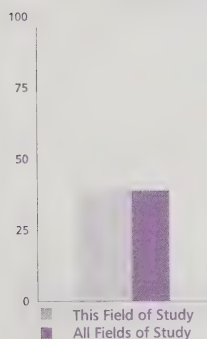
## Where Did They Go?

1992



## Percentage of Women

1994



## After Graduation

In 1994, 2,570 students received a diploma in cooking from a trade/vocational college and the majority found work in their field. Most graduates are employed in the food services industry. Information from various graduate surveys shows that:

- Nearly three out of four graduates found full-time employment, and more than one out of 10 found part-time employment; the unemployment rate for these graduates is about the same as for other trade/vocational graduates.
- Two years after graduation, full-time earnings are below the average for other trade/vocational graduates, but increase at about the average rate for the next three years.
- Women account for approximately 39% of graduates, compared with 42% about 10 years ago.
- These graduates sometimes work with graduates in other food processing technologies.
- A relatively significant number of graduates change jobs. The majority of those employed in the food and beverage occupations two years after graduation are still there three years later, although some have become supervisors, managers or administrators. Other graduates working as supervisors two years after graduation have gone back into food preparation three years later.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had an average unemployment rate. Their earnings are low and declining relative to the earnings of other graduates at the same level of studies. A lower proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve and become good.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase, although at a slower rate. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more success when searching for employment as *maitres d'hôtel*, hosts/hostesses, chefs, cooks or food counter attendants. These occupations are concentrated in the accommodation and food service industries. This industry is expected to exhibit above average growth over the remainder of the decade.

## Work Prospects

1995 to 2000



See also: This Field of Study Code: T81. Related Codes: CB2, T82, T83. Vol. 1 Occupations Cross-index: 063, 624, 645, 664, 666.





# Food Preparation - Other

Trade/Vocational College, (6 months)

## Program of Study

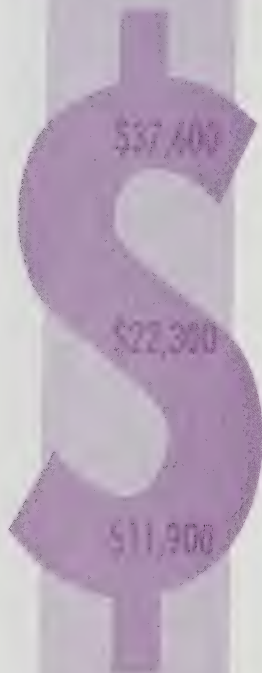
Students receive training in baking as well as in bartending and dietary administration.

- This program is offered in every province except Prince Edward Island, New Brunswick and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

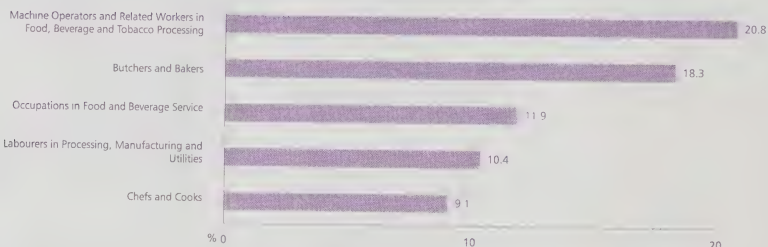


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



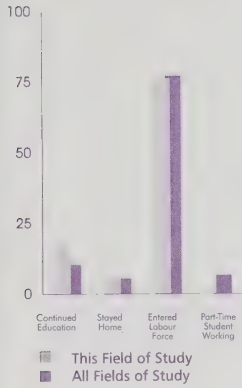
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	67%	74%
Are they satisfied with their work?	96%	92%
Does their work directly match their training?	47%	47%
Do they feel overqualified for their work?	46%	36%

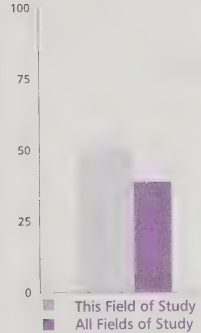
## Where Did They Go?

1992



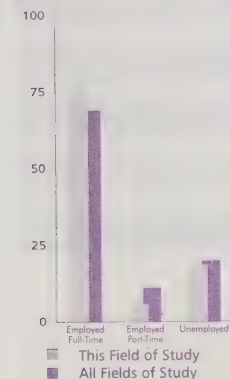
## Percentage of Women

1994



## Work Life of Recent Graduates

1992



## After Graduation

In 1994, 320 students received a diploma in this field from a trade/vocational college. The majority found jobs in food processing occupations. Graduates are employed primarily in the retail trade and processing industries. Information from various graduate surveys shows that:

- Three out of four graduates found full-time employment, and one out of 10 found part-time employment; the unemployment rate for these graduates is slightly below the average rate for other trade/vocational graduates.
- Two years after graduation, full-time earnings are slightly lower than the average for other trade/vocational graduates but increase at an above average rate for the next three years.
- Women account for approximately 52% of graduates, compared with 45% about 10 years ago.
- These graduates often find work in the same occupations as graduates from cooking, food processing and service industry technology programs.
- A fairly significant number of graduates change jobs. While the majority of graduates employed in the food related occupations two years after graduation are still there three years later, some have gone into other services, management, administration or even teaching.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- The unemployment rate for recent graduates from this field of study has been improving. Their earnings are low but rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to improve yet remain fair.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is not expected to keep pace. The competition between these graduates and more experienced, but non-employed, workers will be weak.
- These graduates will have more difficulty when searching for employment as food and beverage machine operators, butchers and bakers than as chefs, cooks, maitres d'hôtel, hosts/hostesses, bartenders, and food and beverage servers. These occupations are concentrated in the accommodation and food services industry which is expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: T82. Related Codes: C82, T81, T83. Vol. 1 Occupations Cross-index: 624, 625, 645, 664, 946.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?

# Service Industries Technologies - Other

Trade/Vocational College (5 months)

## Program of Study

Students receive training in food service, the hotel industry, tourism, building custodianship, funeral direction and embalming, and dry cleaning and laundering.

- This program is offered in every province except Prince Edward Island and Newfoundland.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

Full-Time Earnings

1992

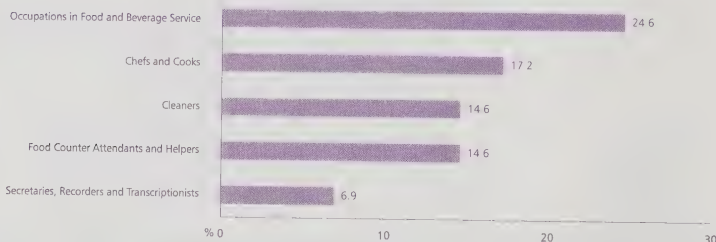


of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

Occupations of Graduates

1992



Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	64%	74%
Are they satisfied with their work?	96%	92%
Does their work directly match their training?	47%	47%
Do they feel overqualified for their work?	41%	36%



## After Graduation

In 1994, 600 students received a diploma in this field from a trade/vocational college. Most found jobs as food and beverage servers, chefs, cooks or cleaners and are usually employed in the accommodation and food services industry. Information from various graduate surveys shows that:

- Three out of five graduates found full-time employment, and one out of six found part-time employment; the unemployment rate for these graduates is above the average for other trade/vocational graduates.
- Two years after graduation, full-time earnings are slightly above the average for other trade/vocational graduates but increase very slowly for the next three years.
- Women account for approximately 34% of graduates, compared with 45% about 10 years ago.
- These graduates often work in the same occupations as service industry technology, food preparation and cooking graduates.
- Not many graduates change jobs. The large majority of those employed in food processing two years after graduation are in the same field three years later, although some find jobs as clerks.

## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is poor.

- Recent graduates from this field of study have had a worsening and above average unemployment rate. Their earnings are high and rising relative to the earnings of other graduates at the same level of studies. An average proportion of these graduates have found jobs that they feel are directly related to their training.

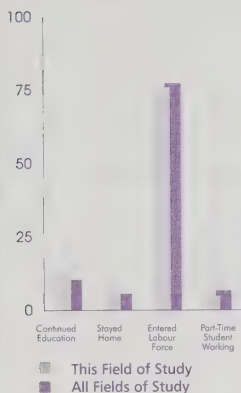
Over the next five years, the labour market situation for these graduates is expected to improve and yet remain poor.

- While job openings are expected to be more numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase at a slightly slower pace. The competition between these graduates and more experienced, but non-employed, workers will be average.
- These graduates will have more difficulty when searching for employment in the general clerical and management fields, than as chefs, cooks and food servers. These occupations are concentrated in the accommodation and food service industry, which is expected to exhibit above average growth over the remainder of the decade.

**See also:** This Field of Study Code: T83. Related Codes: C82, T81, T82. Vol. 1 Occupations Cross-index: 063, 624, 645, 664, 666.

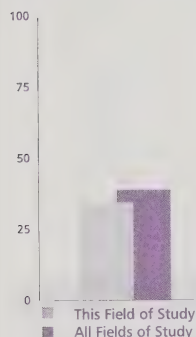
### Where Did They Go?

1992



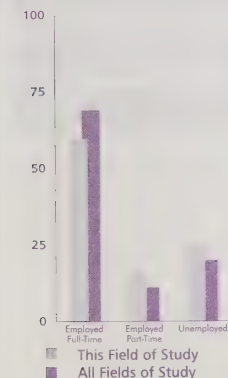
### Percentage of Women

1994



### Work Life of Recent Graduates

1992



## Work Prospects

1995 to 2000







# Social Services

Trade/Vocational College (7 months)

## Program of Study

Students receive training in child care, geriatric care, social services and social assistance.

- This program is offered in every province except Prince Edward Island and Saskatchewan.

**Prerequisites:** Admission requirements vary depending on the type of program, the institution and the province, but applicants are generally required to have a secondary school diploma. Applicants are advised to consult the educational institution concerned for more information.

## Full-Time Earnings

1992

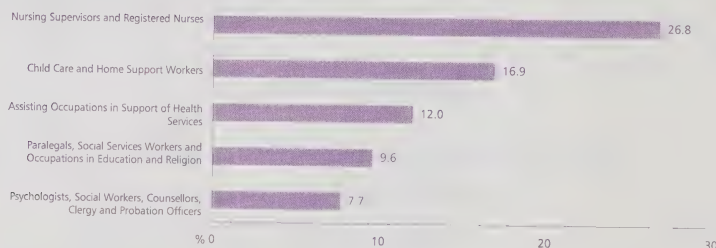


## of Graduates\*

\*Full-time earnings of the highest 10%, the average and the lowest 10% of graduates at this level. \$24,200 is the average for all fields of study at this level.

## Occupations of Graduates

1992



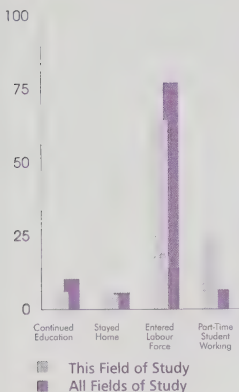
## Graduates Speak Out

1992

HOW MANY SAID YES	THIS FIELD OF STUDY	ALL FIELDS OF STUDY
Would they make the same educational choice again?	84%	74%
Are they satisfied with their work?	93%	92%
Does their work directly match their training?	62%	47%
Do they feel overqualified for their work?	34%	36%

## Where Did They Go?

1992



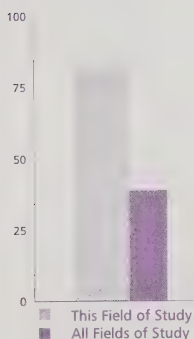
## After Graduation

In 1994, 920 students received a diploma in social services from a trade/vocational college. Most found jobs in the health care industry and others in social services. Graduates are usually employed by hospitals. Information from various graduate surveys shows that:

- Three out of five graduates found full-time employment, and one out of four found part-time employment; the unemployment rate for these graduates is lower than for other trade/vocational graduates.
- Two years after graduation, full-time earnings are slightly below the average for other graduates at this level and increase at half the average rate for the next three years.
- Women account for approximately 83% of graduates, the same rate as about 10 years ago.
- These graduates often enter the same occupations as graduates in nursing, psychology, sociology, social work, religion, education and counselling and personal arts.
- Few graduates change jobs. The majority of those employed in health care services two years after graduation are in the same field three years later. The same is true for those working in personal services or social services two years after graduation.

## Percentage of Women

1994



## Work Prospects

Due to weakness remaining from the 1991-92 recession, the current labour market situation in the occupations in which these graduates usually look for work is fair.

- Recent graduates from this field of study have had a lower than average unemployment rate. Their earnings are stable but low relative to the earnings of other graduates at the same level of studies. A significantly higher proportion of these graduates than average have found jobs that they feel are directly related to their training.

Over the next five years, the labour market situation for these graduates is expected to worsen yet remain fair.

- While job openings are expected to be slightly less numerous than over the previous five-year period, the number of people with the requisite skills for these jobs is expected to increase slightly. The competition between these graduates and more experienced, but non-employed, workers will be strong.
- These graduates will have more difficulty when searching for employment as community and social service workers and child care and home support workers than as health and social services support workers. These occupations are concentrated in the health and social services industry which is expected to exhibit weak growth over the remainder of the decade.

## Work Prospects

1995 to 2000

Getting Better

Stable

Getting Worse

for Graduates

How will labour market conditions change for these graduates?

See also: This Field of Study Code: T85, Related Code: C84.  
Vol. 1 Occupations Cross-index: 341, 415, 421, 627, 647.



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